



OAKVILLE

THE CORPORATION OF THE TOWN OF OAKVILLE
DEPARTMENT OF PUBLIC WORKS

STANDARD
DRAWINGS

TOWN OF OAKVILLE

DEPARTMENT OF PUBLIC WORKS STANDARD DRAWINGS INDEX

SERIES I - GENERAL

ABBREVIATIONS	1 - 1
DRAWING SYMBOLS	1 - 2
TYPICAL TITLE BLOCK	1 - 3

SERIES II - MANHOLES

SEMI PRE-CONSTRUCTION MANHOLE (825mm DIAMETER TO 2700mm DIAMETER PIPE)	2 - 1
DROP STRUCTURES FOR MANHOLES	2 - 2

SERIES III - CATCHBASINS AND CONNECTIONS

PRE-CAST CATCHBASIN - NO SUMP	3 - 1
CAST IN PLACE CATCHBASIN - NO SUMP	3 - 2
CAST IN PLACE DITCH INLET	3 - 3
CATCHBASIN CONNECTION DETAIL	3 - 4

SERIES IV - TRENCH DETAILS

TYPICAL BEAM SUPPORT OF EXISTING SERVICE	4 - 1
------------------------------------------	-------

SERIES V - FRAMES AND COVERS

BIRD CAGE CATCHBASIN TOP	5 - 1
BEEHIVE CATCHBASIN TOP	5 - 2

SERIES VI - CONCRETE WORKS , WALKWAYS AND PATHS

TWO STAGE EXTRUDED CURB & GUTTER	6 - 1
SUB-DRAINS	6 - 2
CONCRETE SIDEWALK DETAILS	6 - 3
CONCRETE WALKWAY DETAILS	6 - 4
STANDARD BICYCLE PATH	6 - 5
CONCRETE HEADWALL UNDER 1.5m SIDEWALK (EXTENDED CULVERT)	6 - 6
CONCRETE HEADWALL UNDER 1.5m SIDEWALK	6 - 7
REINFORCED CONCRETE HEADWALL (FOR DRIVEWAY CULVERTS)	6 - 8

SERIES VII - STANDARD STREET SECTIONS

16m ROAD ALLOWANCE	7 - 1a
18m ROAD ALLOWANCE	7 - 1
20m ROAD ALLOWANCE	7 - 2
24m ROAD ALLOWANCE	7 - 3a
26m ROAD ALLOWANCE	7 - 3
30m ROAD ALLOWANCE	7 - 4
35m ROAD ALLOWANCE	7 - 5
16m CUL-DE-SAC	7 - 6a
18m CUL-DE-SAC	7 - 6
TYPICAL TURN AROUND FOR TEMPORARY DEAD END STREETS	7 - 7
LOW HEIGHT TWO STAGE BARRICADE	7 - 7a
ROAD CUT RESTORATION DETAIL	7 - 8
TYPICAL LOCATION OF UNDERGROUND UTILITIES FOR LOT SERVICING	7 - 9
INTERIM STREET SECTION FOR 16m ROAD ALLOWANCE	7 - 13a
GENERAL NOTES APPLICABLE TO ALL STANDARD STREET SECTIONS	7 - 20
RESIDENTIAL LANEWAY 7.5m RIGHT OF WAY	7 - 21a
COMMERCIAL LANEWAY 12.0m RIGHT OF WAY	7 - 21b
LOCAL ROADWAY 17.0m RIGHT OF WAY MODIFIED BOULEVARD SPACE	7 - 22a
LOCAL ROADWAY 20.0m RIGHT OF WAY EMPLOYMENT AREAS	7 - 22b
CONNECTOR / TRANSIT CORRIDOR 19.0m RIGHT OF WAY	7 - 23
AVENUE / TRANSIT CORRIDOR 22.0m RIGHT OF WAY	7 - 24
GENERAL URBAN and SUB-URBAN, NEIGHBOURHOOD CENTRE AND EMPLOYMENT AREAS	
AVENUE / TRANSIT CORRIDOR 24.0m RIGHT OF WAY URBAN CORE AREA	7 - 25
MINOR ARTERIAL / TRANSIT CORRIDOR 26m RIGHT OF WAY GENERAL URBAN AND EMPLOYMENT AREAS	7 - 26
SUB-DRAIN	7 - 60

SERIES VIII - DESIGN DATA

RAINFALL CURVE (5 YEAR FREQUENCY)	8 - 1
FILL HEIGHT TABLE - CONCRETE PIPE (CLASS "B1" & "B3" BEDDING)	8 - 2
TRAPEZOIDAL CHANNEL NOMOGRAPH (RIP-RAP, GRASS OR GABION LINED)	8 - 3
ROAD GEOMETRIC DESIGN STANDARDS	8 - 4

SERIES IX - TRAFFIC REQUIREMENTS

300mm DIAMETER ELECTRICAL INSPECTION CHAMBER	9 - 1
460mm DIAMETER ELECTRICAL INSPECTION CHAMBER	9 - 2
460mm DIAMETER ELECTRICAL INSPECTION CHAMBER	9 - 2a
TRAFFIC SIGNAL INTERCONNECT	
PAVEMENT MARKINGS FOR A SUPERVISED SCHOOL CROSSING	9 - 4
CONCRETE BASE FOR LIGHTING AND TRAFFIC SIGNAL POLES	9 - 5
JUNCTION BOX CONNECTION DETAIL	9 - 6
CONNECTION DETAIL IN ALUMINUM STREET LIGHT POLE WITH TWO (2) LUMINAIRES	9 - 7
STREET LIGHT POLE	9 - 8
HYDRO CABLE & ROAD CROSSING TRENCH	9 - 9
STANDARD CONCRETE ENCASED DUCT ARRANGEMENTS	9 - 10
TRAFFIC CONTROL 'M' CABINET FOUNDATION	9 - 11
TRAFFIC CONTROL 'M' CABINET FOUNDATION WITH IC PEDESTAL	9 - 11A
TRAFFIC CONTROL 'M' CABINET FOUNDATION WITH IC PED. AND POWER PED.	9 - 11B
TRAFFIC CONTROL 'P44' CABINET FOUNDATION WITH IC PED. AND POWER PED.	9 - 11C
STANDARD REQUIREMENTS FOR BANNERS	9 - 12
METER POST	9 - 13
POLE MOUNTING DETAILS FOR BASE MOUNTED ALUMINUM POLE	9 - 14
LOOP DETECTOR INSTALLATION DETAIL 1	9 - 15
LOOP DETECTORS INSTALLATION DETAILS II	9 - 16
"3M" OPTICAL PRE EMPTION	9 - 17
"300" ARM	9 - 18
DIRECT BURY (DBY) SPLICE KIT	9 - 19
GUIDELINE TO LOCATE POSTS SUPPORTING ALL-WAY STOP SIGN WITH TIGER TAIL TAB	9 - 20
NEIGHBOURHOOD AVENUE (22m R.O.W.) 2 LANE INTERSECTION FAR SIDE CURB EXTENSIONS TRAFFIC CALMING DESIGN	9 - 21-A
NEIGHBOURHOOD AVENUE (22m R.O.W.) 2 LANE INTERSECTION FAR SIDE CURB EXTENSIONS PAVEMENT MARKING TREATMENT	9 - 21-B
NEIGHBOURHOOD AVENUE (22m R.O.W.) 2 LANE MID BLOCK PAVEMENT MARKING TREATMENT	9 - 21-C
NEIGHBOURHOOD CONNECTOR (19m R.O.W.) INTERSECTION FAR SIDE CURB EXTENSION TRAFFIC CALMING DESIGN	9 - 22-A
NEIGHBOURHOOD CONNECTOR (19m R.O.W.) INTERSECTION FAR SIDE CURB EXTENSION PAVEMENT MARKING TREATMENT	9 - 22-B
NEIGHBOURHOOD CONNECTOR (19m R.O.W.) MID BLOCK PAVEMENT MARKING TREATMENT	9 - 22-C
NEIGHBOURHOOD LOCAL (17m R.O.W.) INTERSECTION FAR SIDE CURB EXTENSION TRAFFIC CALMING DESIGN	9 - 23-A
NEIGHBOURHOOD AVENUE (22m R.O.W.) MID BLOCK CURB EXTENSION TRAFFIC CALMING DESIGN	9 - 24-A
NEIGHBOURHOOD AVENUE (22m R.O.W.) MID BLOCK CURB EXTENSION PAVEMENT MARKING TREATMENT	9 - 24-B
NEIGHBOURHOOD CONNECTOR (19m R.O.W.) MID BLOCK CURB EXTENSION TRAFFIC CALMING DESIGN	9 - 25-A
NEIGHBOURHOOD CONNECTOR (19m R.O.W.) MID BLOCK CURB EXTENSION PAVEMENT MARKING TREATMENT	9 - 25-B
NEIGHBOURHOOD LOCAL (17m R.O.W.) MID BLOCK CURB EXTENSION TRAFFIC CALMING DESIGN	9 - 26-A
NEIGHBOURHOOD AVENUE (22m R.O.W.) MID BLOCK PEDESTRIAN CROSSING DESIGN	9 - 27-A
NEIGHBOURHOOD AVENUE (22m R.O.W.) MID BLOCK PEDESTRIAN CROSSING PAVEMENT MARKING TREATMENT	9 - 27-B

NEIGHBOURHOOD CONNECTOR (19m R.O.W.) MID BLOCK PEDESTRIAN CROSSING DESIGN	9 - 28-A
NEIGHBOURHOOD CONNECTOR (19m R.O.W.) MID BLOCK PEDESTRIAN CROSSING PAVEMENT MARKING TREATMENT	9 - 28-B
GUIDELINES FOR PAVEMENT MARKINGS OF SUBDIVISION ROADS SOUTH OF DUNDAS STREET	9 - 30

SERIES X - MISCELLANEOUS

PRE-CAST CONCRETE SPLASH PAD	10 - 1
DRIVEWAY ENTRANCE CRITERIA	10 - 2
RESIDENTIAL CONCRETE DRIVEWAY APRON	10 - 3

ABUTMENT	ABUT.			RADIUS	R OR RAD.
ACRES	AC.	FINAL MEASUREMENT	F.M.	RAILWAY	RWY
ALLOVANCE	ALL'CE	FLOOR	FLR.	REGISTERED PLAN	R.P.
AMERICAN SOCIETY FOR TESTING & MATERIALS	A.S.T.M.	FOOTING	FTG.	REINFORCED	REINF.
APARTMENT	APT.	FORE SIGHT	F.S.	RESIDENTIAL	RES.
APPROVED	APP'D	FOUNDATION	FDN.	RETAINING WALL	RET.W.
ASBESTOS	ASB.	FRAME	FR.	REVISION	REV.
ASBESTOS CEMENT	A.C.	FREEWAY	FRWY	RIGHT	R.T.
ASBESTOS CEMENT PIPE	A.C.P.			RIGHT OF WAY	R.O.W.
ASBESTOS CEMENT PRESSURE PIPE	A.C.P.P.			ROAD	RD.
ASPHALT	ASPH.	GALVANIZED	GALV.	ROUND IRON BAR	R.I.B.
AVENUE	AVE.	GARAGE	GAR.		
AVERAGE	AV.	GAS	G.	SAFE PASSING SIGHT DISTANCE	S.P.S.D.
AVERAGE ANNUAL DAILY TRAFFIC	A.A.D.T.	GAUGE	GA.	SAVE STOPPING SIGHT DISTANCE	S.S.S.D.
AZIMUTH	AZ.	GEODETIC BENCH MARK	G.B.M.	SAND	SA.
		GRADE OR GRAVEL	GR.	SANITARY	SAN.
		GRANULAR	GRAN.	SECTION	SECT.
		GUIDE RAIL	G.R.	SEWAGE TREATMENT PLAN	S.T.P.
BACK FILL	B.FILL			SEWER	SEW.
BACK SIGHT OR BUS STOP	B.S.			SHEET	SH.
BASEMENT	BSMT			SIDEWALK	S/W
BEDDING	BED.	HEADWALL	HD W.	SIGNAL	SIG.
BEGINNING OF CURVE	B.C.	HIGH POINT	H.P.	SOUTH OR SUPERELEVATION	S.
BEGINNING OF VERTICAL CURVE	B.V.C.	HIGH WATER LEVEL	H.W.L.	SPECIFICATION	SPEC.
BELL TELEPHONE	B.	HIGHWAY	H.WY.	SPIRAL TO CURVE	S.C.
BENCH MARK	B.M.	HORIZONTAL	HOR.	SPIRAL TO TANGENT	S.T.
BOULEVARD	BLVD.	HOT LAID	H.L.	SQUARE	SQ.
BRICK	BR.	HOT MIX	H.M.	STANDARD	STD
BUILDING	BLDG.	HOUSE	HSE	STANDARD IRON BAR	S.I.B.
BUILDING LINE	B/L	HYDRANT	HYD.	STANDARD STRENGTH	S.S.
		HYDRO	H.	STATION	STA.
CANADIAN NATIONAL RAILWAY	C.N.R.			STOP OR STREET	ST.
CANADIAN PACIFIC RAILWAY	C.P.R.			STOPPING SIGHT DISTANCE	S.S.D.
CANADIAN STANDARD ASSOCIATION	C.S.A.	INDUSTRIAL	IND.	STORM	STM
CAST IRON PIPE	C.I.P.	INSIDE DIAMETER	I.D.	STORY	STY
CATCH BASIN	C.B.	INSTRUMENT	INSTR.	STRUCTURE	STR.
CENTRE TO CENTRE	C/C	INSULATED	INS.	STUCCO	STUC.
CENTRE LINE	QORCL.	INTERMEDIATE SIGHT	I.S.	SUBDIVISION	SUBD.
CHAINAGE EQUATION	CH.EQ	INVERT	INV.		
CHAIN LINK FENCE	C.L.F.	IRON BAR	I.B.	TANGENT	TAN.
CHECKED	CHK'D	IRON PIPE	I.P.	TANGENT TO SPIRAL	T.S.
CHORD	CH.	KILOGRAM	kg	TECHNICAL	TECH.
CLASS OR CLAY	CL.	KILOMETRES PER HOUR	km/h	TELEGRAPH	T
CLAY PIPE	CL.P.	LEFT	LT	TERRACE	TER.
CLEAN OUT	C.O.	LENGTH	LEN		
COMMERCIAL	COMM.	LENGTH OF VERTICAL CURVE	L.V.C.	TOWNSHIP	TWP
CONCESSION	CON.	LIGHT STANDARD	L.S.	TRAFFIC LIGHT	T.L.
CONCRETE	CONC.	LINEAL METRE	L.m	TRANSFORMER	TRANS.
CONCRETE MONUMENT	C.M.	LOW POINT	L.P.	TURNING POINT	T.P.
CONCRETE PIPE	C.P.	LOW WATER LEVEL	L.W.L.	TYPICAL	TYP.
CONSTRUCTION	CONST.	LITRE	l		
CORNER	COR.	MILLILITRE	ml	VALVE	V.
CORRUGATED STEEL PIPE	C.S.P.	MAIL BOX	M.B.	VELOCITY	VEL.
COUNTY	CO.	MANHOLE	M.H.	VERTICAL	VERT.
COURT	CT.	MAXIMUM	MAX.	VERTICAL POINT OF INTERSECTION	V.P.I.
CREEK	CR.	MEGA	M	VISIBILITY CURVE	V.C.
CRESCENT	CRES.	MINISTRY OF TRANSPORTATION	M.T.C.	VITRIFIED PIPE	V.T.P.
CROSS SECTION	X-SEC.	AND COMMUNICATIONS		VOLUME	VOL.
CUBIC	CU	MINIMUM	MIN.		
CUBIC METRE PER SECOND	m ³ /s	MUNICIPAL	MUN.		
CULVERT	CULV.	METRE	m		
CURB & GUTTER	C.B.G.	MILLIMETRE	mm		
CURVE TO SPIRAL	C.S.	NO PARKING	N	WALKWAY	W/W
CENTIMETRE	cm	NORTH	N	WATER LEVEL	W.L.
		NOT TO SCALE	N.T.S.	WATER OR WEST	W.
		NUMBER	N°		
DEGREE OF CURVE	D.				
DEPARTMENT	DEPT.				
DIAMETER	DIA.				
DISTANCE	DIST.	OBVERT	OBV.		
DITCH INLET	D.I.	ORIGINAL GROUND	O.G.		
DIVISION	DIV.	OUTSIDE DIAMETER	O.D.		
DRAWING	DWG.				
DRIVE	DR.				
DRIVEWAY	DWY	PARKWAY	PKWY		
DUCTILE IRON PIPE	D.I.P.	PART OR POINT	PT		
		PAVEMENT	PAVT		
		PERSONS PER ACRE	P.P.A.		
		PIPE	P.		
EACH	EA.	POINT OF COMPOUND CURVE	P.C.C.		
EARTH CUT OR END OF CURVE	E.C.	POINT OF CURVE	P.C.		
EARTH FILL	E.F.	POINT OF INTERSECTION	P.I.		
EAST OR EXTERNAL	E.	PASCAL	Pa.		
EDGE OF PAVEMENT	E.P.	PROPERTY OR PROPOSED	PROP.		
ELECTRIC	ELEC.	PROPERTY LINE	PROP. L OR P/L		
ELEVATION	EL.	PUMPING STATION	P.S.		
END OF VERTICAL CURVE	E.V.C.				
ENGINEER	ENG.				
ENTRANCE	ENT.				
ESTIMATE	EST.	QUANTITY	QTY		
EXCAVATION	EXC.				
EXISTING	EXIST.				
EXPRESSWAY	EXPY.				
EXTRA STRENGTH	E.S.				

MUNICIPALITY: TOWN OF OAKVILLE

ABBREVIATIONS

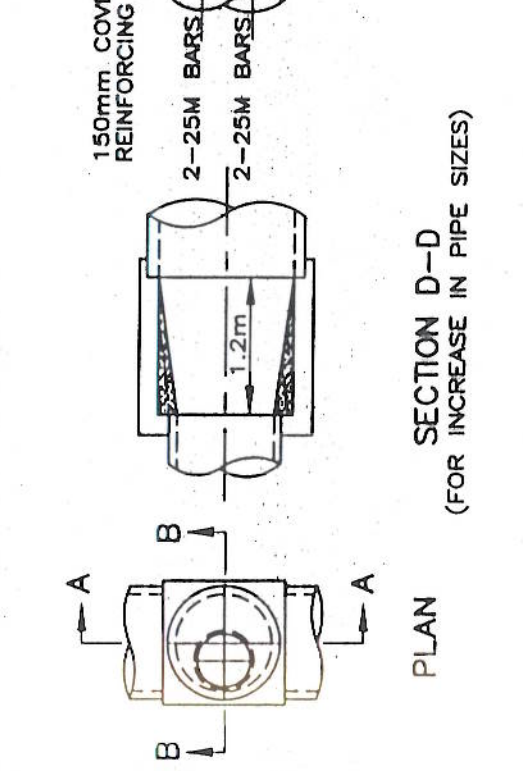
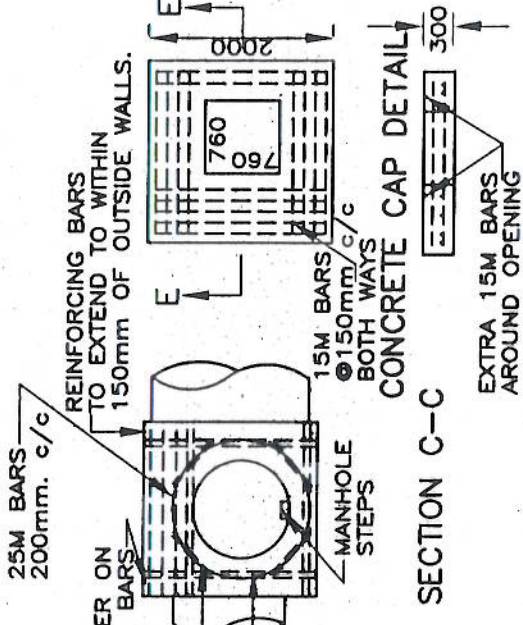
APPROVED

DIRECTOR OF PUBLIC WORKS

STD I-1

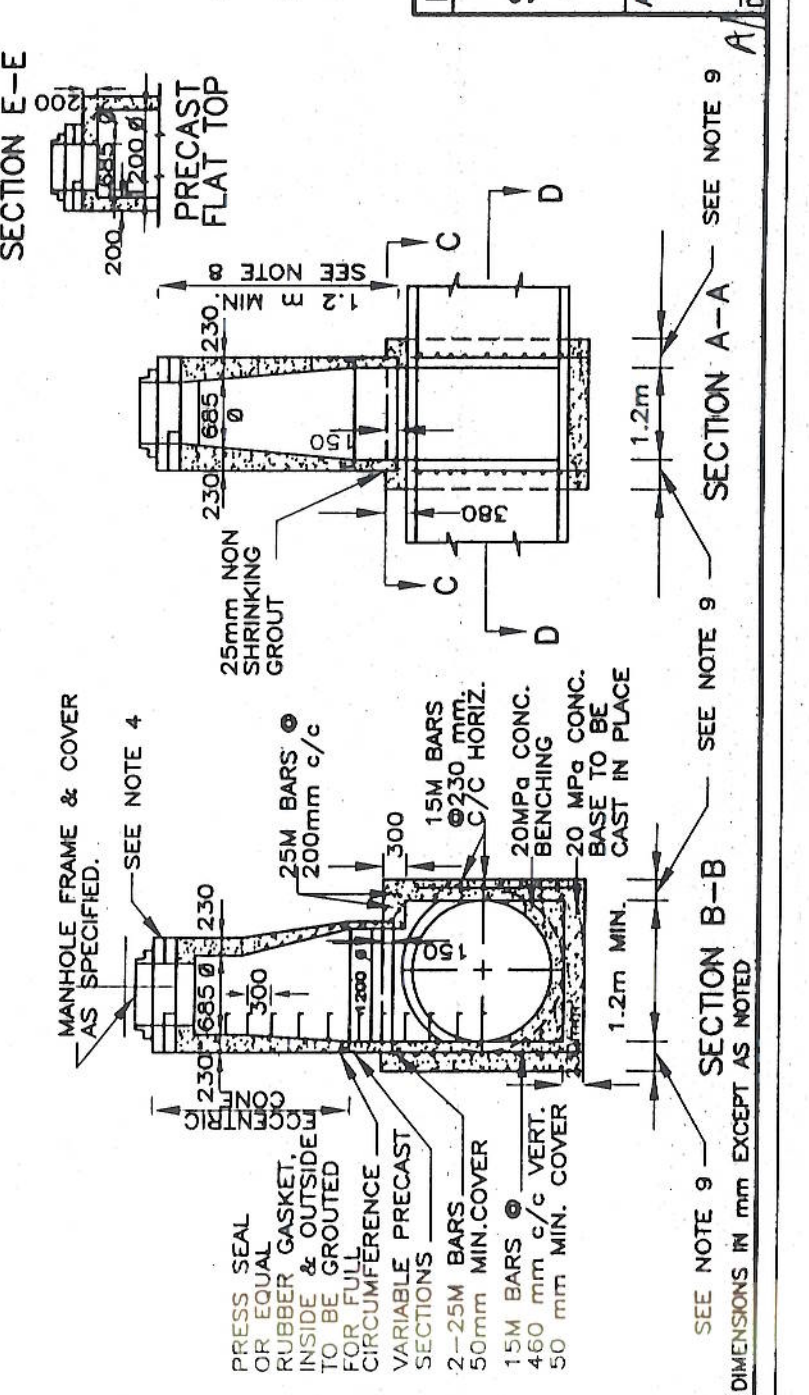
REVISION DATE
07201995

- NOTES:**
- FOR CAST IN PLACE BASE, CONCRETE TO BE 20 MPa. AT 28 DAYS.
 - PRECAST MANHOLE SECTIONS SHALL BE EQUAL TO A.S.T.M. SPECIFICATIONS C-478.
 - STEPS-FIRST STEP TO BE 75mm BELOW FRAME. LAST STEP TO BE 300mm ABOVE BENCHING, OR 600mm ABOVE INVERT.
 - PRECAST MANHOLE ADJUSTING RINGS (MODULOC, DURACON OR APPROVED EQUAL) MIN. THICKNESS 50mm, MAX. 250mm TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
 - OPENING IN BASE FOR PRECAST MANHOLE SECTION TO BE NOT LARGER THAN O.D. OF SECTION PLUS 25mm. 12mm SPACE TO BE FILLED WITH HOT BITUMINOUS SEALER.
 - ALL JOINTS AND LIFTING HOLES IN MANHOLE SECTIONS TO BE COMPLETELY FILLED WITH A 1:3 MORTAR MIX AND POINTED BEFORE BACKFILLING.
 - PIPES ENTERING PRECAST SECTIONS ON MANHOLE MUST NOT ENTER AT JOINTS.
 - PRECAST FLAT TOP TO BE USED WHEN TOTAL HEIGHT OF PRECAST SECTION IS LESS THAN 1.2m.
 - WALLS 230mm FOR MANHOLES 4.6m OR LESS, 300mm FOR MANHOLES OVER 4.6m
 - MANHOLE SAFETY PLATFORMS ARE REQUIRED BY LAW FOR MANHOLE DEPTH GREATER THAN 5.3m.
 - 15MPa CONCRETE UP TO 1/2 O.D. TO UNDISTURBED GROUND UNDER ALL PIPES.



PLAN

25M BARS 200mm. c/c
REINFORCING BARS TO EXTEND TO WITHIN 150mm OF OUTSIDE WALLS.
150mm COVER ON REINFORCING BARS
2-25M BARS
2-25M BARS
MANHOLE STEPS
15M BARS @ 150mm c/c BOTH WAYS
25M BARS 200mm. c/c



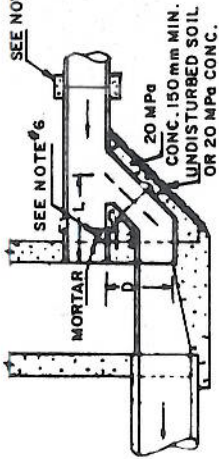
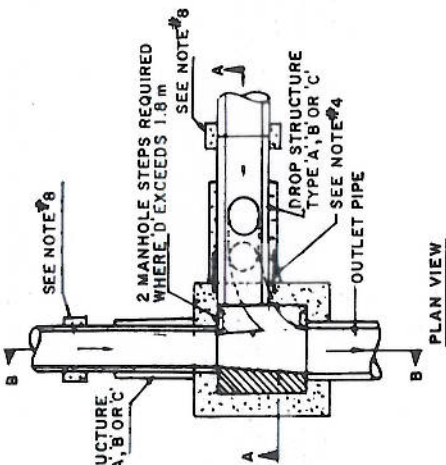
MUNICIPALITY: TOWN OF OAKVILLE

SEMI-PRECAST MANHOLE
825mm ϕ TO 2700mm ϕ PIPE

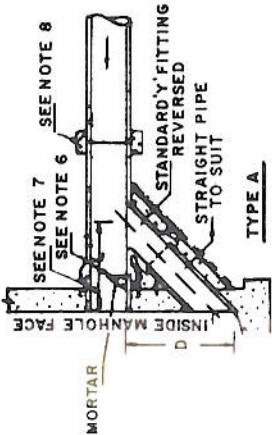
APPROVED *[Signature]*
DIRECTOR OF PUBLIC WORKS

STD. 2-1
REVISION DATE
MAY 1, 2003

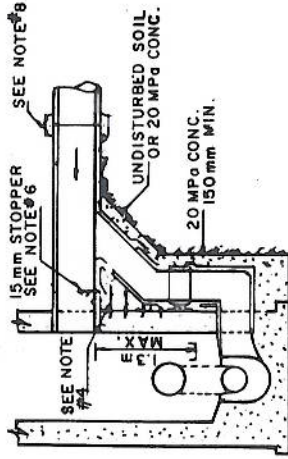
SEE NOTE 9
DIMENSIONS IN mm EXCEPT AS NOTED



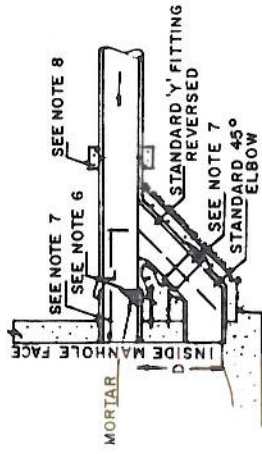
SECTION B-B



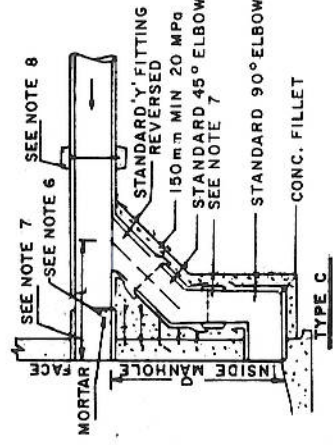
TYPE A



SECTION A-A



TYPE B



DROP PIPE (mm)	TYPE 'A'		TYPE 'B'		TYPE 'C'		MAX. VELOCITY m/sec.
	'D'	'L'	'D'	'L'	'D'	'L'	
200	.915	.815	.610	.760	1.22	1.07	NO STOPPER 1.42
250	1.02	.840	.650	.815	1.30	1.07	1.55 4.05
300	1.09	.865	.710	.915	1.45	1.14	1.71 4.11
400	1.17	.915	.915	1.14	1.91	1.22	1.92 4.18
450	1.30	.990	.990	1.22	2.06	1.30	2.16 4.27
550	1.42	1.04	1.07	1.30	2.21	1.45	2.35 4.45
600	1.52	1.09	1.14	1.37	2.44	1.52	2.53 4.60
700	1.63	1.14	1.22	1.45	2.51	1.60	2.70 4.72
750	1.73	1.22	1.30	1.52	2.67	1.68	2.83 5.00

DIMENSIONS IN METERS

- NOTES:
- DROP PIPE TO BE ONE PIPE SIZE SMALLER THAN INLET PIPE.
 - DROP PIPE TO BE CROWNS LEVEL WITH OUTLET PIPE AND BENCH TO CROWN.
 - DROP PIPE TO BLEND WITH FLOW.
 - DROP STRUCTURE TO BE ENCASED IN A MINIMUM OF 150 mm OF 20 MPa CONCRETE AND DOWELLED TO MANHOLE WITH 15 mm Ø STEELS 450 mm LONG, EITHER SIDE OF DROP PIPE AND AT 300 mm C/C.
 - MAXIMUM VELOCITIES SHOWN IN TABLE INDICATE MAX. VELOCITY IN INCOMING PIPE WITH NO OVERSHOOTING.
 - WHEN USED ON STORM SEWERS OR SANITARY SEWERS 375 mm DIA. OR LARGER, A 12 mm CONC. STOPPER MAY BE INSERTED IN THE INVERT OR THE MAIN LINE, AS INDICATED.
 - ADJUSTMENT IN 'D' AND 'L' TO BE MADE WITH PLAIN AND STRAIGHT PIPE.
 - WHERE Y-FITTING JOINS FIRST PIPE, A 300 mm WIDE BY 150 mm THICK 20 MPa COLLAR IS TO BE CONSTRUCTED.
 - ALL CONCRETE IN DROP STRUCTURE TO BE 20 MPa AT 28 DAYS.
 - MINIMUM DIMENSIONS BASED ON USE OF JTD. CONCRETE FITTINGS AS PER LATEST INFORMATION BY SUPPLIERS.
 - ALL DIMENSIONS ARE SUBJECT TO MANUFACTURERS PERMISSIBLE VARIATIONS.

MUNICIPALITY: TOWN OF OAKVILLE

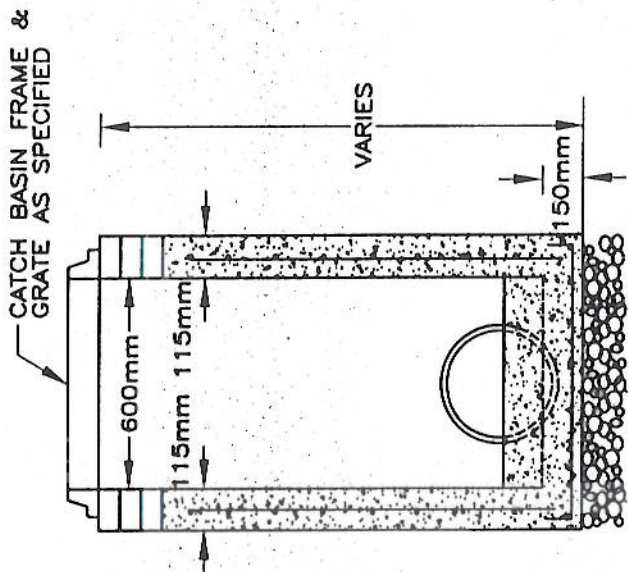
DROP STRUCTURES FOR MANHOLES

APPROVED: 

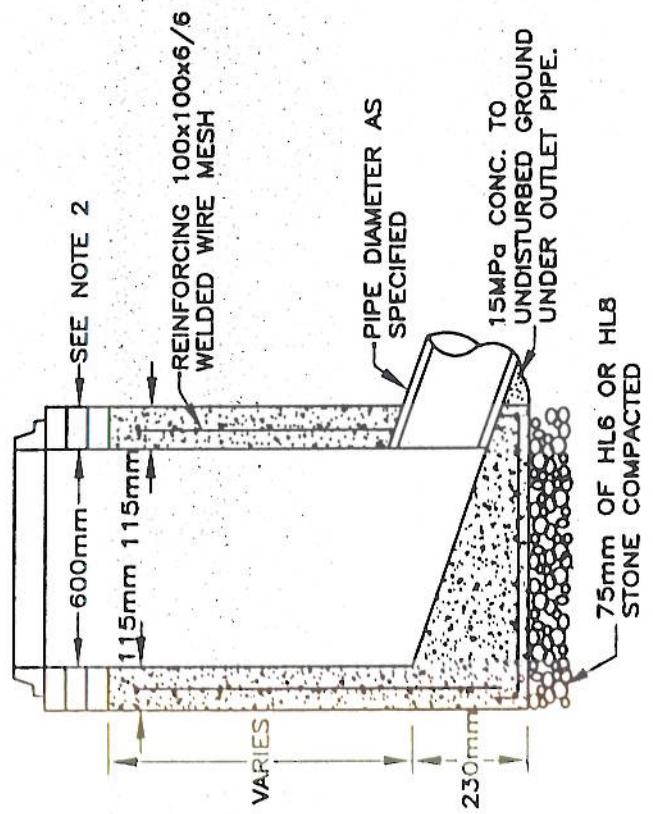
DIRECTOR OF PUBLIC WORKS

STD 2-2

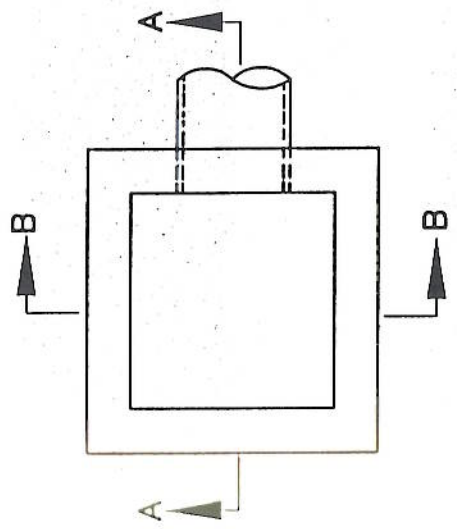
REVISION DATE: 07201995



SECTION B-B



SECTION A-A



PLAN

NOTES:

- 1.-CONCRETE TO BE 25MPa AT 28DAYS
- 2.-PRECAST CATCHBASIN ADJUSTMENT RINGS (MODULOC, DURACON OR APPROVED EQUAL) MIN. THICKNESS 100mm MAX. 250mm TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- 3.-ALL JOINTS AND LIFTING HOLES TO BE COMPLETELY FILLED WITH A 1:3 MORTAR MIX AND POINTED BEFORE BACKFILLING.
- 4.-CATCHBASIN WITHOUT SUMP TO BE USED FOR REAR LOT LOCATIONS.

MUNICIPALITY: TOWN OF OAKVILLE

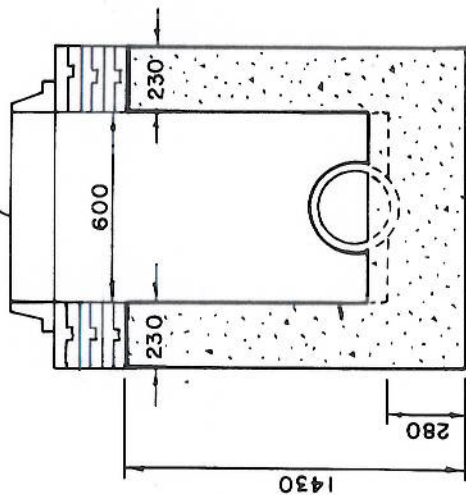
PRECAST CATCHBASIN

WITHOUT SUMP

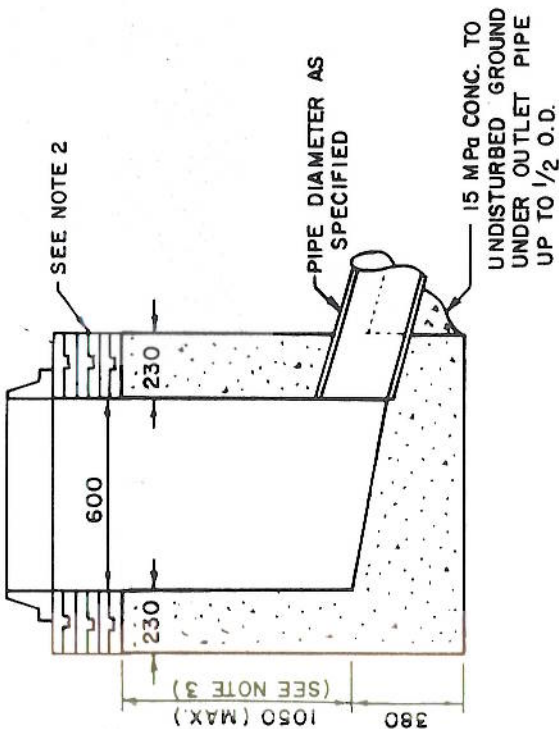
APPROVED	STD. 3-1
<i>[Signature]</i>	REVISION DATE
DIRECTOR OF PUBLIC WORKS	MAY 1, 2003

DIMENSIONS IN mm EXCEPT AS NOTED

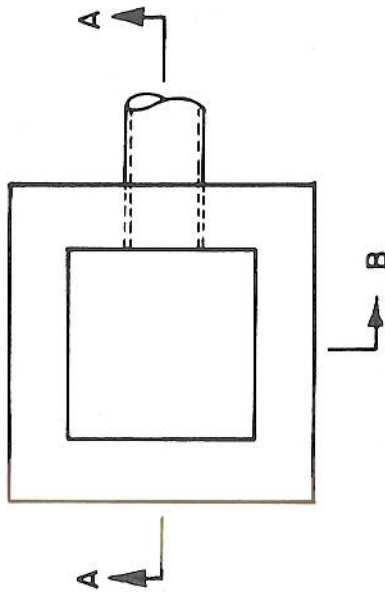
CATCH BASIN FRAME & GRATE AS SPECIFIED



SECTION B-B



SECTION A-A



PLAN

DIMENSIONS IN mm EXCEPT AS NOTED

NOTES :

1. CONCRETE TO BE 20 MPa AT 28 DAYS.
2. PRECAST CATCHBASIN ADJUSTMENT RINGS (MODULOC, DURACON OR APPROVED EQUAL) MIN. THICKNESS 100 mm MAX 250 mm TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS
- 3 THIS DIMENSION MAY BE LESS , AS DIRECTED BY ENGINEER.

MUNICIPALITY : TOWN OF OAKVILLE

CAST IN PLACE CATCH BASIN

WITHOUT SUMP

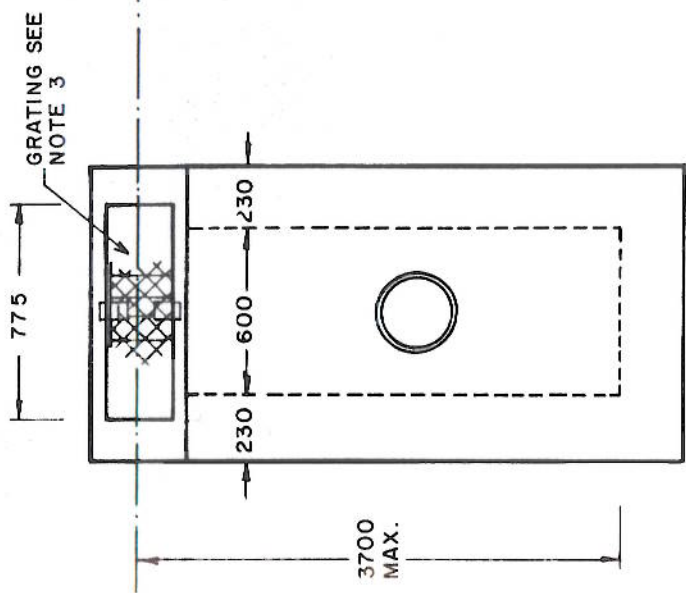
APPROVED: 

STD 3-2

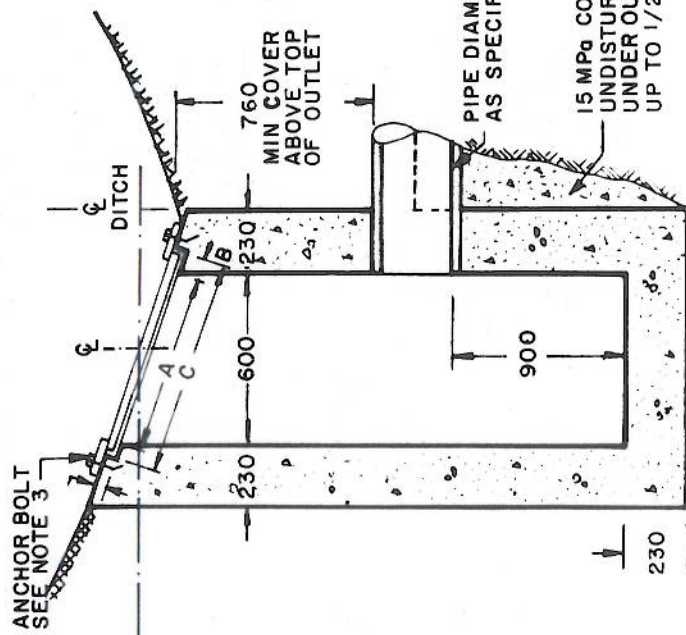
REVISION DATE

07201995

DIRECTOR OF PUBLIC WORKS



FRONT VIEW



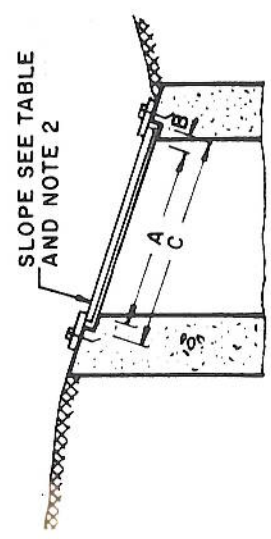
SIDE VIEW

(INLET ON DITCH SLOPE)

NOTES :

1. CONCRETE TO BE 20 MPa AT 28 DAYS .
2. WHERE INLET IS PLACED ACROSS DITCH AND IS ACCESSIBLE TO VEHICULAR TRAFFIC, GRATING SLOPE IS TO BE 6 : 1 OR FLATTER .
3. SEE O.P.S.D. FOR DETAIL OF GRATING AND ANCHOR BOLTS.

TABLE			
OPENING DIMENSIONS			
POSITION	GRATE SLOPE	A	B C
INLET ON DITCH SLOPE	2 : 1	680	48 728
	3 : 1	640	68 708
	4 : 1	630	73 703
INLET ACROSS DITCH	2 : 1	680	48 728
	3 : 1	640	68 708
	4 : 1	630	73 703
	6 : 1	620	80 700
	8 : 1	620	80 700
	10 : 1	610	82 692
	HORIZ.	510	82 692




SIDE VIEW

(INLET ACROSS DITCH)

DIMENSIONS IN mm , EXCEPT AS NOTED .

MUNICIPALITY : TOWN OF OAKVILLE

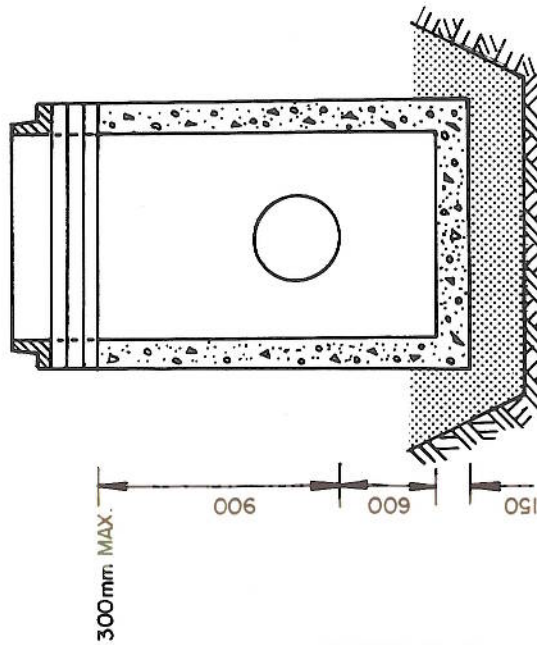
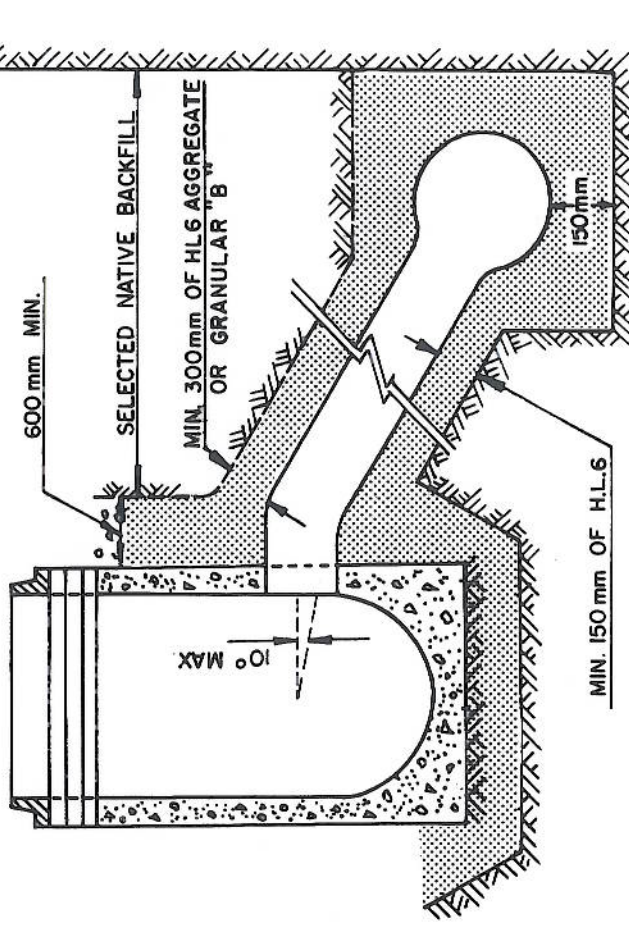
CAST IN PLACE DITCH INLET

APPROVED: 

STD 3-3

REVISION DATE: **07201995**

DIRECTOR OF PUBLIC WORK



NOTES:

- 1)-CONNECTION TO C.B. TO BE MADE BY USING A SANDED COLLAR RING-TITE PS 320 PIPE IF PVC IS SPECIFIED.
- 2)-CONNECTION TO C.B. TO BE AT AN ANGLE OF NOT MORE THAN 10° TO THE HORIZONTAL TO FACILITATE PROPER INSTALLATION OF "PLUG" TYPE INLET CONTROL DEVICES BUT STILL ACHIEVING DRAINAGE.

MUNICIPALITY : TOWN OF OAKVILLE

**CATCH BASIN CONNECTION
DETAILS**

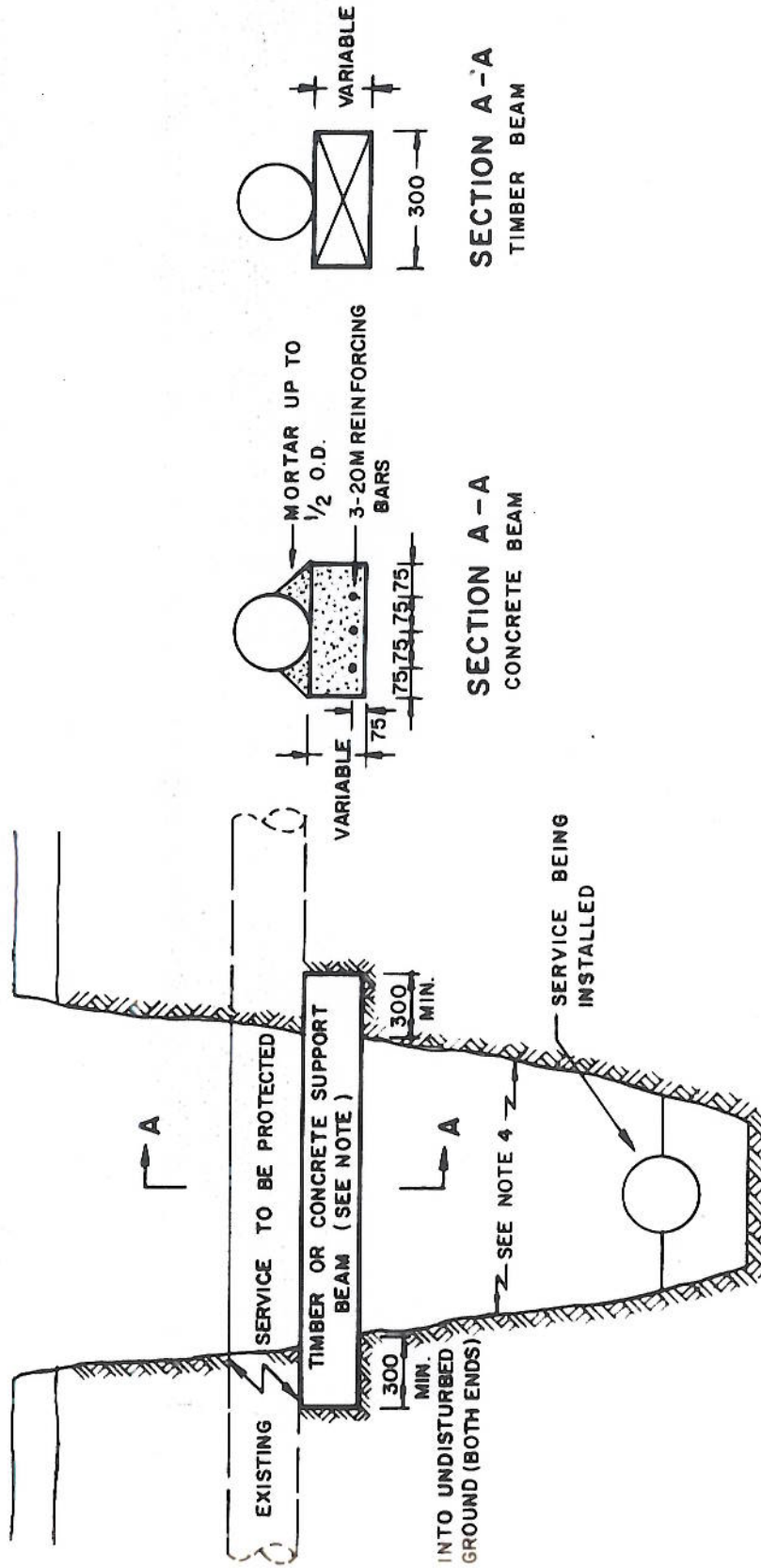
APPROVED: 

STD 3-4

REVISION DATE
07201995

DIRECTOR OF PUBLIC WORK

DIMENSIONS IN mm EXCEPT AS NOTED



TRENCH SECTION

- NOTE
1. SIZE OF BEAM TO BE CONSTRUCTED SHALL VARY AS TO SPAN LENGTH DETERMINED BY THE ENGINEER DURING CONSTRUCTION
 2. WHERE CONC. BEAM IS SPECIFIED, THE MIX IS TO CONTAIN 20 MPa CONCRETE.
 3. WHERE TIMBER IS SPECIFIED, CONSTRUCTION GRADE SPRUCE IS TO BE SUPPLIED.
 4. WHERE A BEAM IS NOT REQUIRED, BACKFILL SHALL BE 13mm CLEAR STONE UP TO EXISTING SERVICE.

MUNICIPALITY : TOWN OF OAKVILLE

**TYPICAL BEAM
FOR THE SUPPORT OF
EXISTING SERVICE**

APPROVED

 DIRECTOR OF PUBLIC WORKS

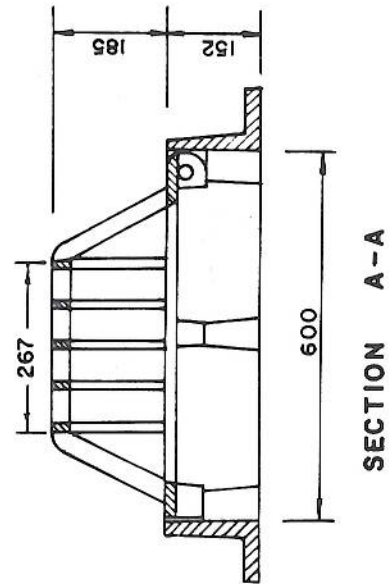
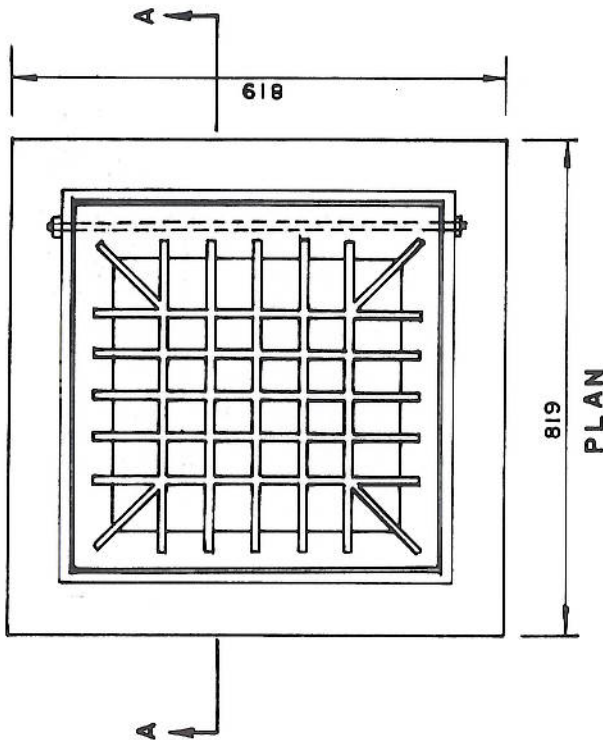
STD 4-1

REVISION DATE
07201995

DIMENSIONS IN mm EXCEPT AS NOTED

NOTES:

- 1) FRAME TO BE J.A.WOTHERSPOON & SON LTD.
NO. JW101 OR EQUAL.
- 2) COVER TO BE J.A.WOTHERSPOON & SON LTD.
NO. JW109 OR EQUAL.
- 3) FRAME AND COVER WEIGHT 186 kg.
- 4) TO BE USED IN DITCHES, WATERCOURSES AND
WHERE ORDERED BY THE ENGINEER.



MUNICIPALITY : TOWN OF OAKVILLE

**BIRD CAGE CATCHBASIN
FRAME AND COVER**

APPROVED:
[Signature]

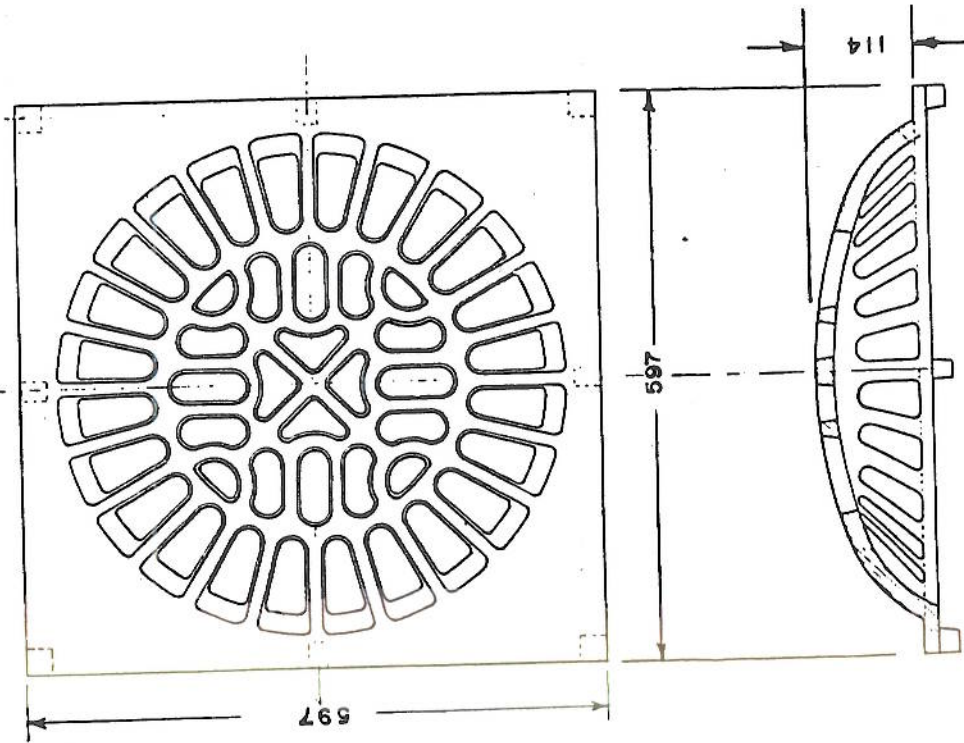
STD 5-1

REVISION DATE
07201995

DIMENSIONS IN mm EXCEPT AS NOTED


NOTES:

- 1) FRAME TO BE J.A.WOTHERSPOON & SON LTD. NO. JW100 OR EQUAL.
- 2) COVER TO BE J.A.WOTHERSPOON & SON LTD. NO. JW105B OR EQUAL.
- 3) FRAME AND COVER WEIGHT 186 kg.
- 4) TO BE USED IN REAR YARD SWALES AND WHERE ORDERED BY THE ENGINEER.

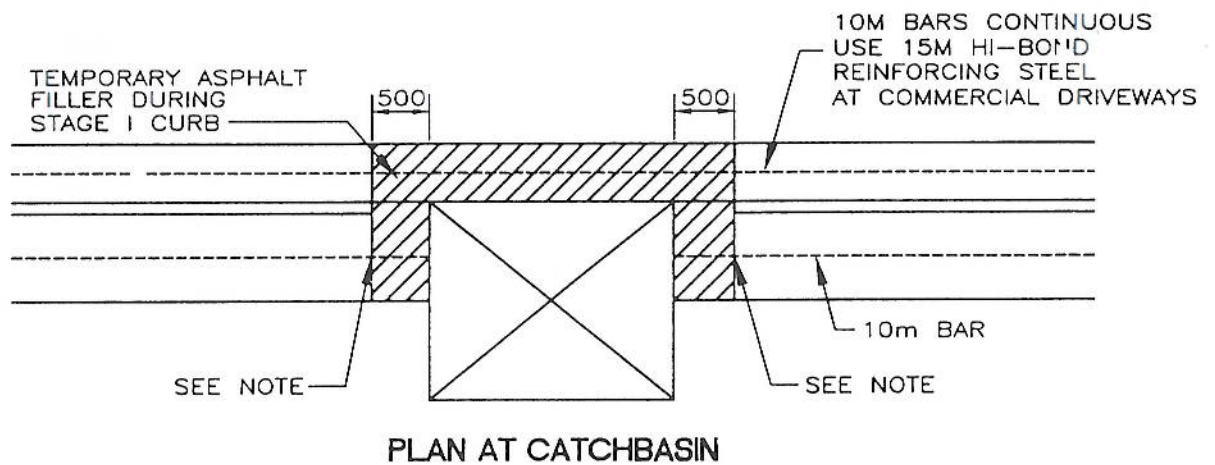
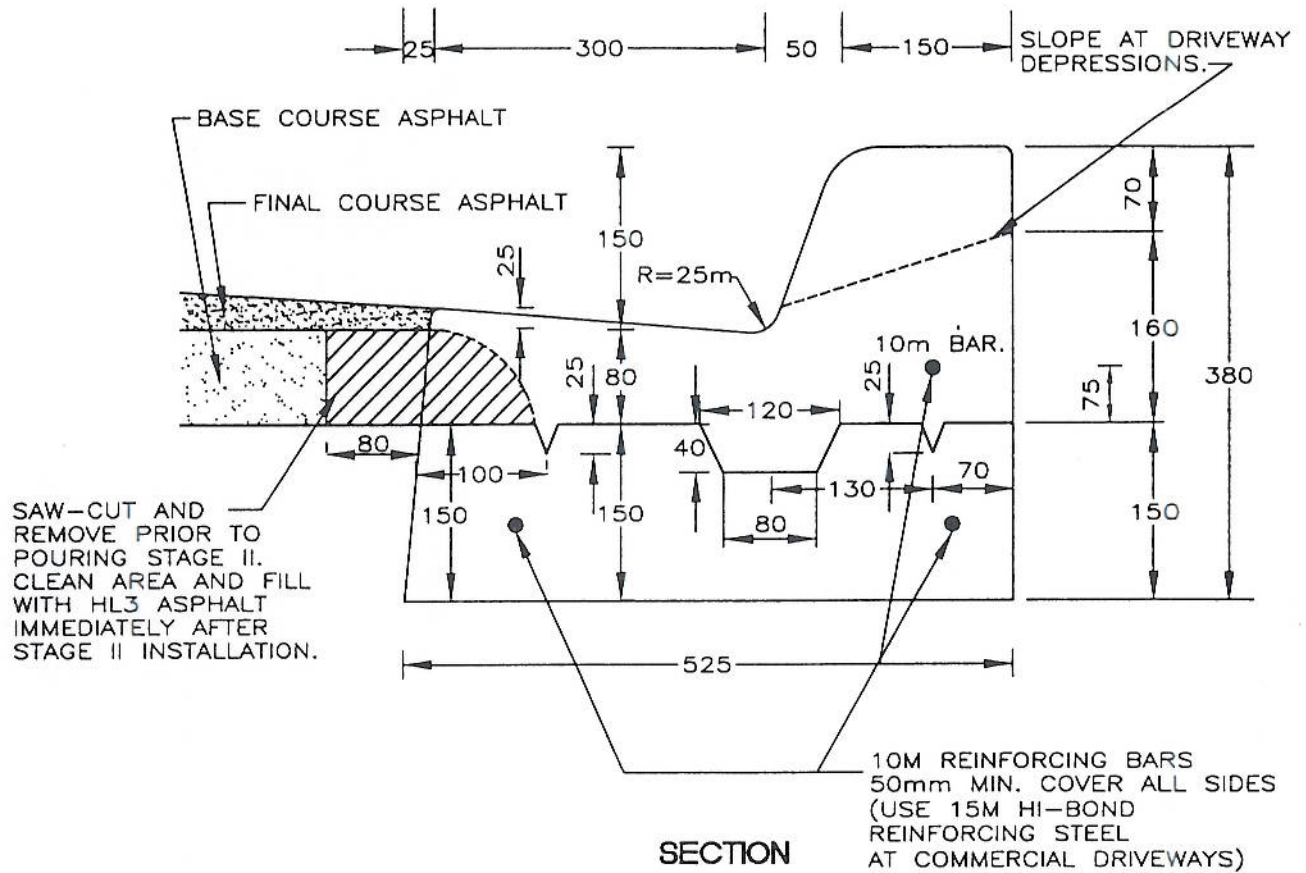


MUNICIPALITY: TOWN OF OAKVILLE

**BEE HIVE CATCHBASIN
FRAME AND COVER**

APPROVED	STD 5-2
	REVISION DATE
DIRECTOR OF PUBLIC WORKS	07201995

DIMENSIONS IN mm EXCEPT AS NOTED



NOTES:

- 1.-PRIOR TO CATCH-BASIN FINAL ADJUSTMENT, SAWCUT BOTH TOP & BOTTOM STAGE CURB ALONG SAME VERTICAL PLANE 500mm FROM EDGE OF CATCH-BASIN. DOWEL TWO (2) 10m BARS 150mm INTO EXISTING BASE CURBS, HAND FORM AND POUR FULL CURB SECTION AT CATCH-BASIN.

- 2.-CONCRETE AS PER OPSS 1350

DIMENSIONS IN mm EXCEPT AS NOTED

MUNICIPALITY: TOWN OF OAKVILLE

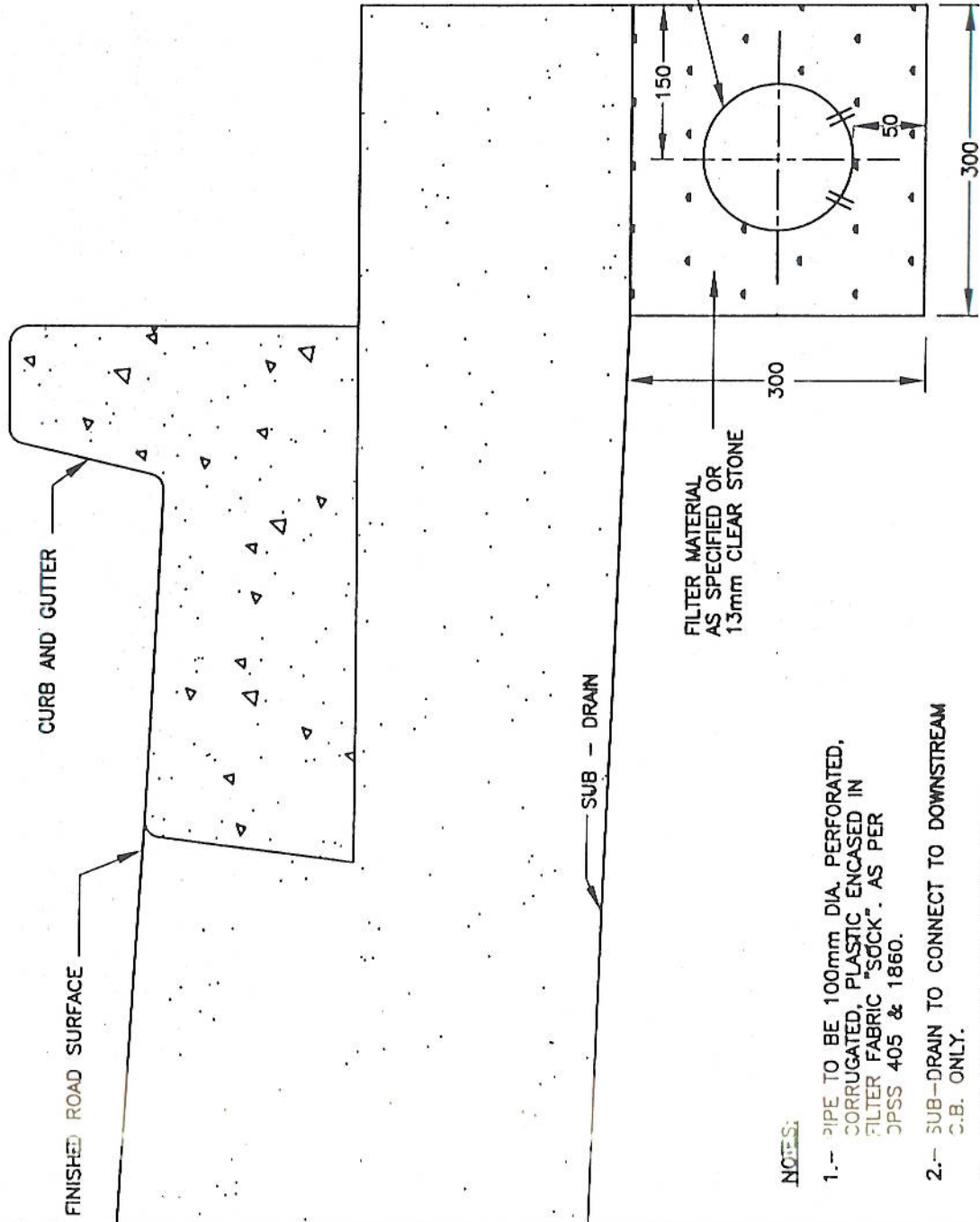
**TWO STAGE
EXTRUDED CONCRETE
CURB AND GUTTER**

APPROVED

DIRECTOR OF PUBLIC WORKS

STD. 6-1

REVISION DATE
FEBRUARY 1999



NOTES:

- 1.- PIPE TO BE 100mm DIA. PERFORATED, CORRUGATED, PLASTIC ENCASED IN FILTER FABRIC "SOCK". AS PER DPSS 405 & 1860.
- 2.- SUB-DRAIN TO CONNECT TO DOWNSTREAM C.B. ONLY.
- 3.- HIGH POINT IN SUB-DRAIN TO BE SEALED WITH FACTORY FABRICATED PLUG.

MUNICIPALITY: TOWN OF OAKVILLE

SUB-DRAINS

APPROVED

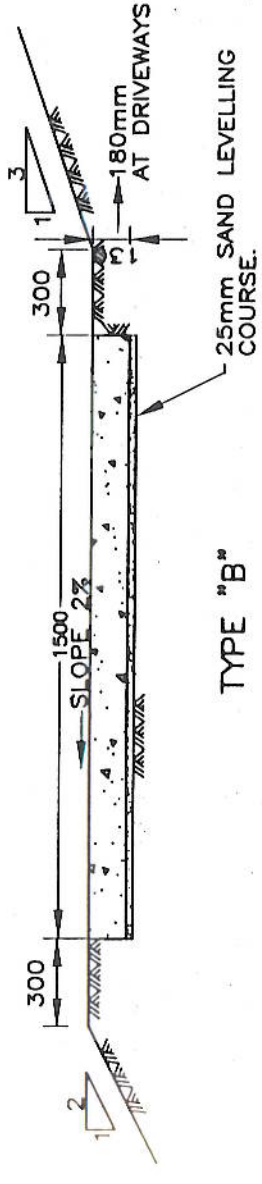
(Signature)
DIRECTOR OF PUBLIC WORKS

STD. 6-2

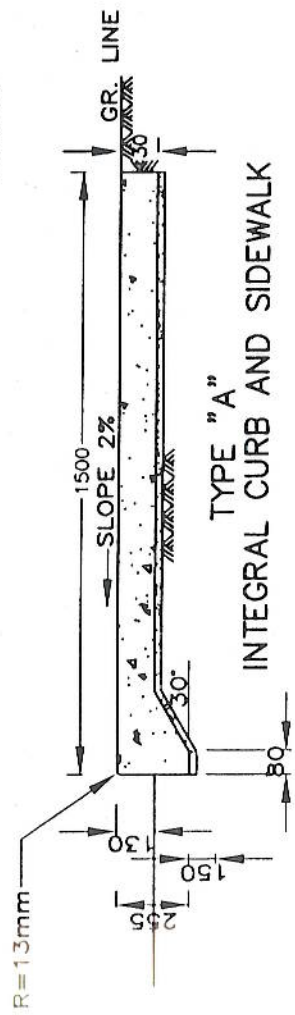
REVISION DATE
MAY 1, 2003

DIMENSIONS IN mm EXCEPT AS NOTED

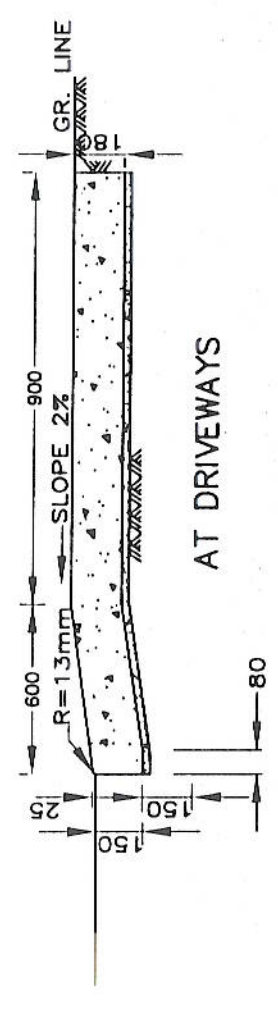
A)



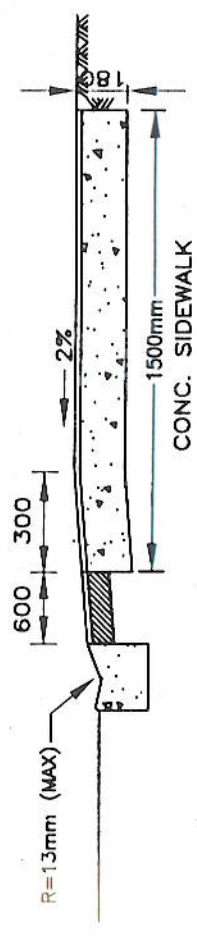
TYPE "B"



TYPE "A"
INTEGRAL CURB AND SIDEWALK



AT DRIVEWAYS



TYPE "B" SIDEWALK TREATMENT AT DRIVEWAY WHEN
SIDEWALK IS 600 mm OR LESS FROM CURB

DIMENSIONS IN mm EXCEPT AS NOTED

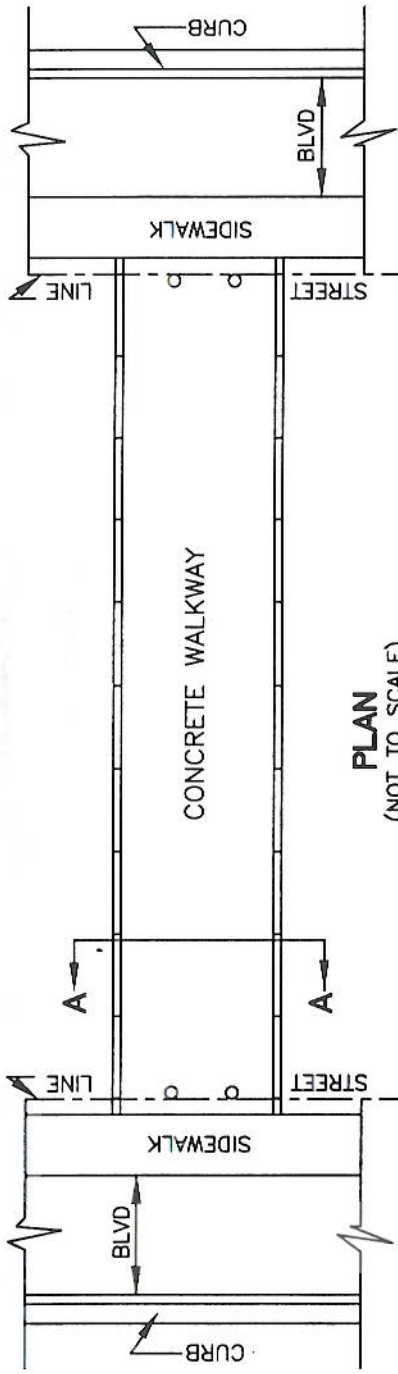
SPECIFICATIONS & NOTES

- 1.-CONCRETE SHALL BE AS PER OPSS 1350 AND A MINIMUM CEMENT CONTENT OF 355 Kg/m³
- 2.-AT COMMERCIAL DRIVEWAYS USE 15M HI-BOND REINFORCING STEEL BARS AT 300 mm c/c in SIDEWALK.
- 3.-JOINTS TO BE INSTALLED AS FOLLOWS:
 - i) "DUMMY" JOINTS AT 1.5m SPACING.
 - ii) "EXPANSION" JOINTS AT 20m SPACING OR AT ANY DIRECTIONAL CHANGE.
- 4.-CURING MEMBRANE (WHITE PIGMENTED) TO BE APPLIED AT THE RATE OF 4 SQUARE METRES PER LITRE.
- 5.-IN SANDY AREA, A 0.1mm POLY SHEET TO BE INSTALLED IN PLACE OF SAND LEVELLING COURSE.
- 6.-AT EACH END OF A DRIVEWAY FOR TYPE 'A' INTEGRAL CURB-SIDEWALK THE HEIGHT OF THE CURB SHALL BE VARIED FROM NORMAL HEIGHT TO DRIVEWAY HEIGHT OVER A DISTANCE OF 600mm.

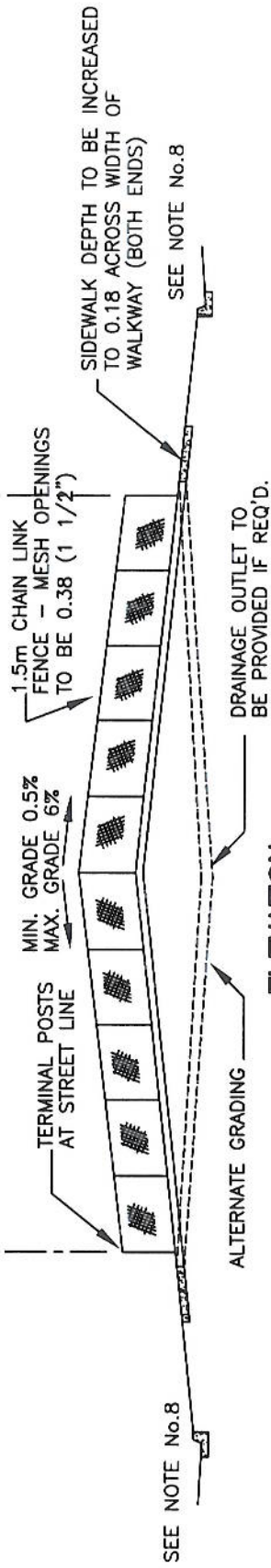
MUNICIPALITY: TOWN OF OAKVILLE

CONCRETE SIDEWALK
DETAIL

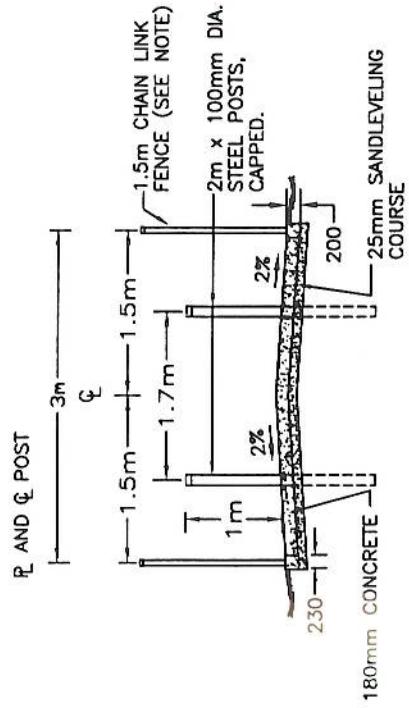
APPROVED	STD. 6-3
<i>[Signature]</i>	REVISION DATE
DIRECTOR OF PUBLIC WORKS	MAY 1, 2003



PLAN
(NOT TO SCALE)




ELEVATION
(NOT TO SCALE)

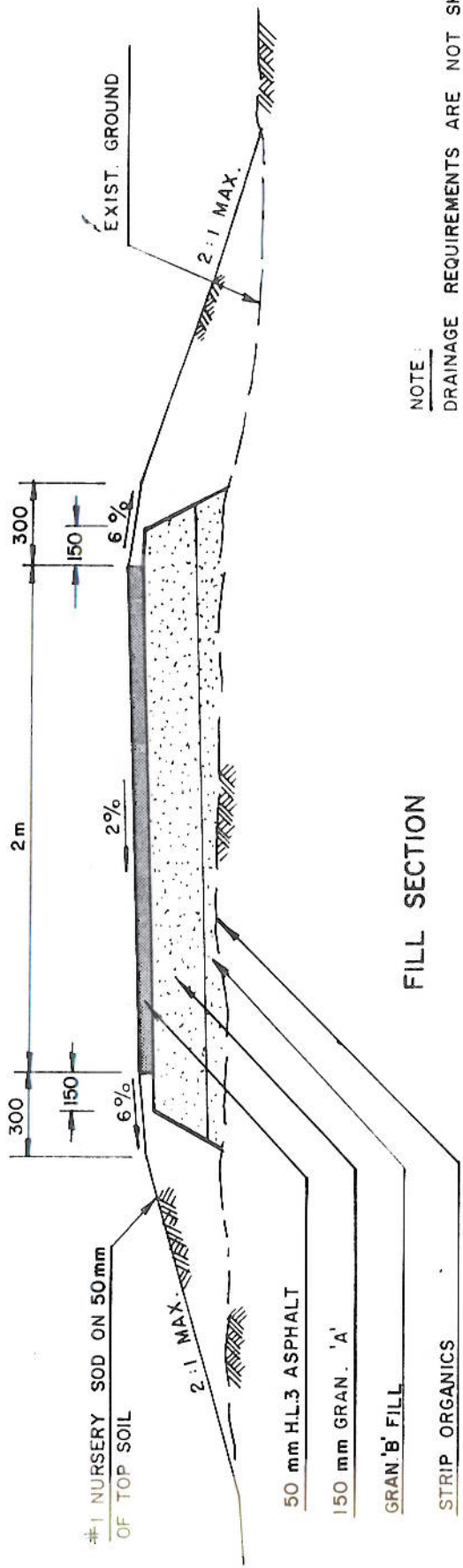


SECTION A-A

- NOTES:**
1. ALL CONCRETE TO BE AS PER O.P.S.S. 1350
 2. EXPANSION JOINT TO BE PROVIDED EVERY 6m WALKWAY TO BE EDGED EVERY 3m.
 3. FENCE TO BE INSTALLED AS PER O.P.S.D. 972.130
 4. POST FOOTINGS TO BE SEPARATE FROM WALK.
 5. ALL FENCE POST FOOTINGS SHALL BE MIN. 1.1m DEEP.
 6. IN SANDY AREA, A 0.1mm POLY SHEET TO BE INSTALLED IN PLACE OF SAND LEVELING COURSE.
 7. NO DEPRESSION IN ROADWAY CURB ACROSS FRONTAGE OF WALKWAY AT ROADWAY.

MUNICIPALITY: TOWN OF OAKVILLE	
CONCRETE WALKWAY	
APPROVED	STANDARD: 6-4
 DIRECTOR OF ENGINEERING AND CONSTRUCTION	
REVISION DATE	JUNE 9, 2008

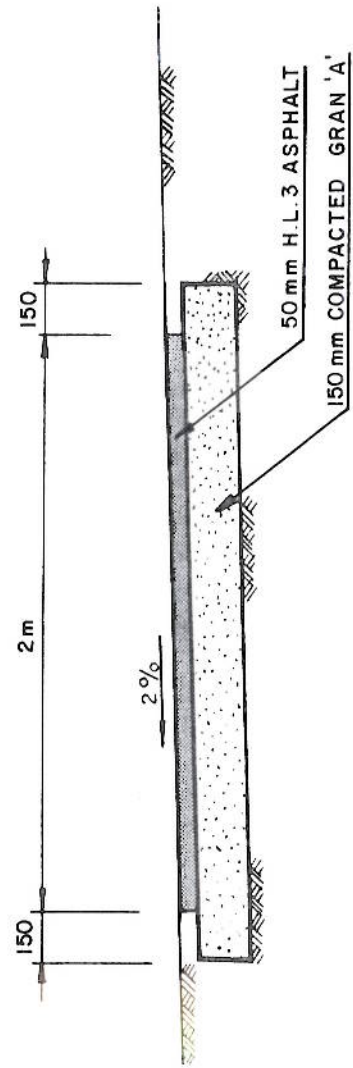
DIMENSIONS IN mm EXCEPT AS NOTED



FILL SECTION

NOTE:

DRAINAGE REQUIREMENTS ARE NOT SHOWN.



CUT SECTION

DIMENSIONS IN mm EXCEPT AS NOTED

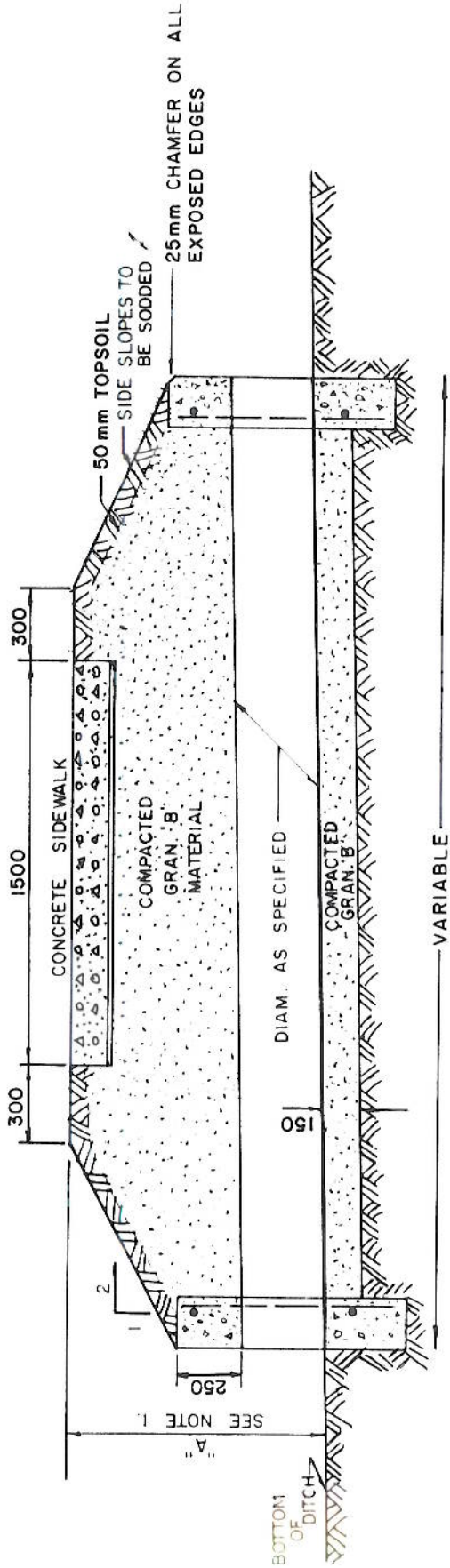
MUNICIPALITY : TOWN OF OAKVILLE

STANDARD BICYCLE PATH

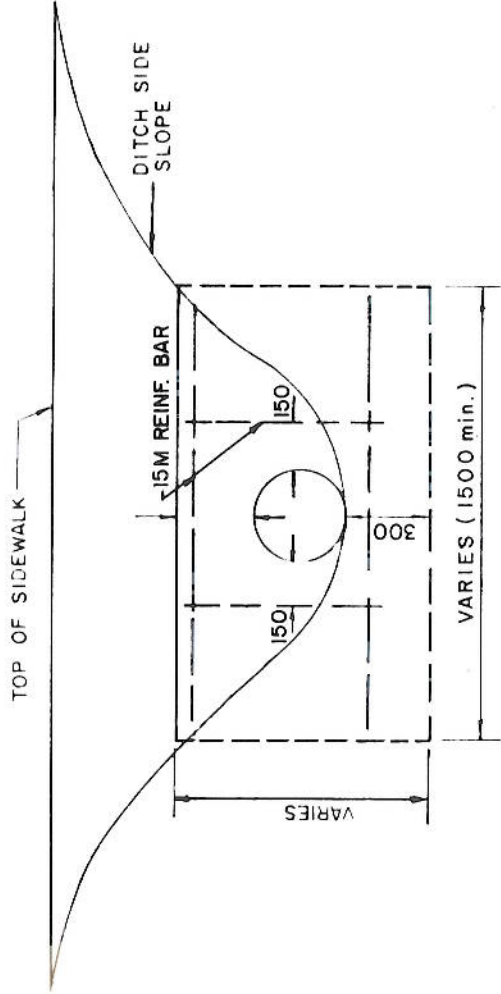
APPROVED: *[Signature]*
 DIRECTOR OF PUBLIC WORKS

STD 6-5

REVISION DATE
 07201995



1. THIS STANDARD TO BE USED WHERE DIMENSION 'A' EXCEEDS 600 mm, OTHERWISE USE STD. 6-7.
2. PIPE DIAMETER AS SPECIFIED ON CONTRACT DRAWINGS.
3. CONCRETE MIX TO MEET SAME SPECS AS MIX USED IN CONC SIDEWALK.
4. ALL REINFORCING STEEL TO BE 15M BARS DEFORMED INTERMEDIATE GRADE STEEL.
5. PIPE TO BE 16 GAUGE GALVANIZED CORRUGATED METAL.



END VIEW

DIMENSIONS IN mm EXCEPT AS NOTED

MUNICIPALITY : TOWN OF OAKVILLE

**CONCRETE HEADWALL
UNDER 1.5m SIDEWALK**

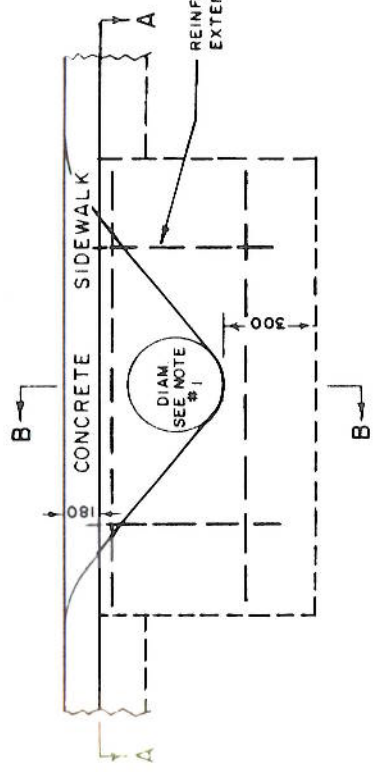
(EXTENDED C.M.P.)

APPROVED: _____
DIRECTOR OF PUBLIC WORKS

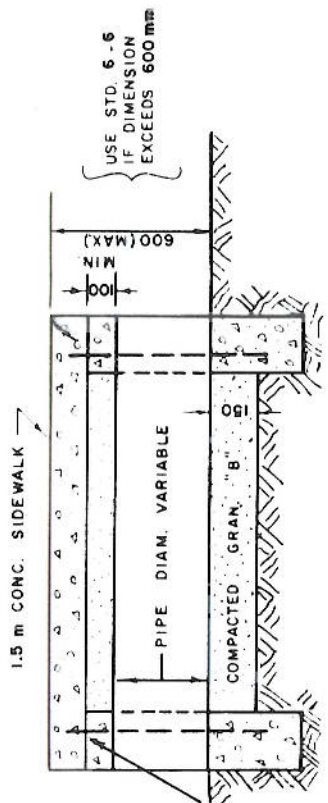
STD 6-6

REVISION DATE

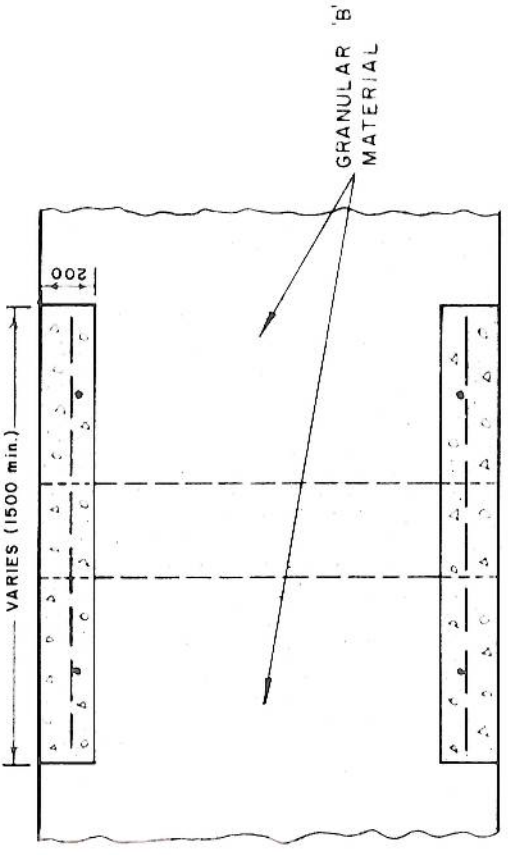
07201995



ELEVATION



SECTION B-B



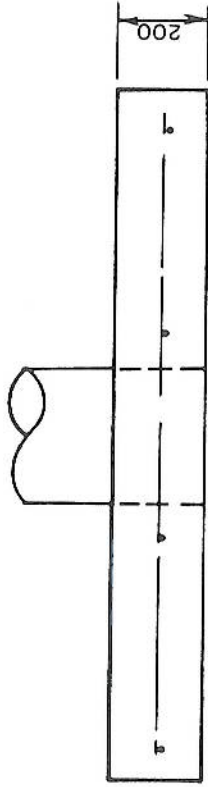
SECTION A-A

NOTES :

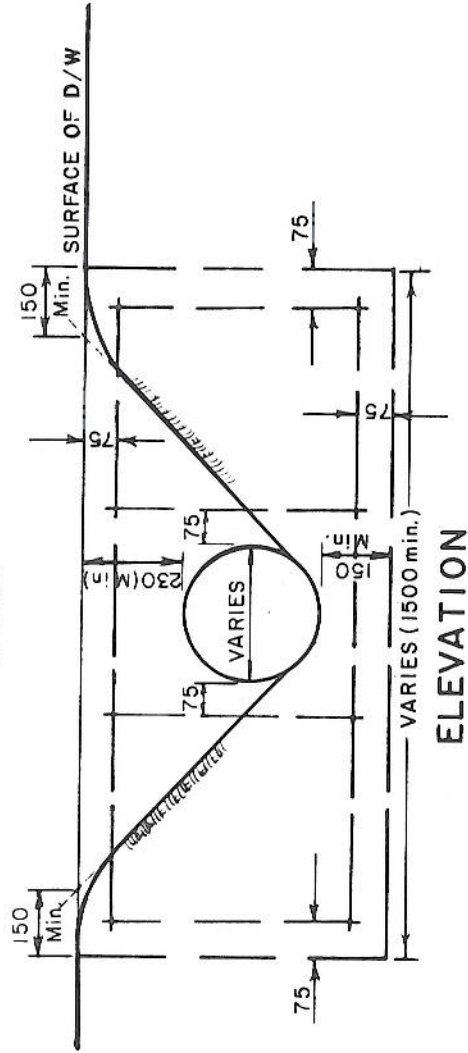
1. PIPE DIAMETER AS SPECIFIED ON CONTRACT DRAWINGS.
2. CONCRETE MIX TO MEET SAME SPECS AS MIX USED IN CONC SIDEWALK.
3. ALL REINFORCING STEEL TO BE 15 M BARS DEFORMED INTERMEDIATE GRADE STEEL.
4. PIPE TO BE 16 GAUGE GALVANIZED CORRUGATED METAL.

MUNICIPALITY : TOWN OF OAKVILLE	
CONCRETE HEADWALL UNDER 1.5 m SIDEWALK	
APPROVED 	STD 6-7 REVISION DATE 07201995
DIRECTOR OF PUBLIC WORKS	

DIMENSIONS IN mm EXCEPT AS NOTED



PLAN



ELEVATION

NOTES:

1. ALL CONCRETE TO BE 25 MPa AT 25 DAYS.
2. REINFORCING STEEL TO BE 15 M DEFORMED BARS OF INTERMEDIATE GRADE STEEL.
3. MINIMUM CONCRETE COVER OVER STEEL BARS 50 mm.
4. SAME DETAIL FOR HEADWALL AT OTHER END OF D/W CULVERT.

MUNICIPALITY : TOWN OF OAKVILLE

REINFORCED
CONCRETE HEADWALL
FOR DRIVEWAY CULVERTS

APPROVED
[Signature]

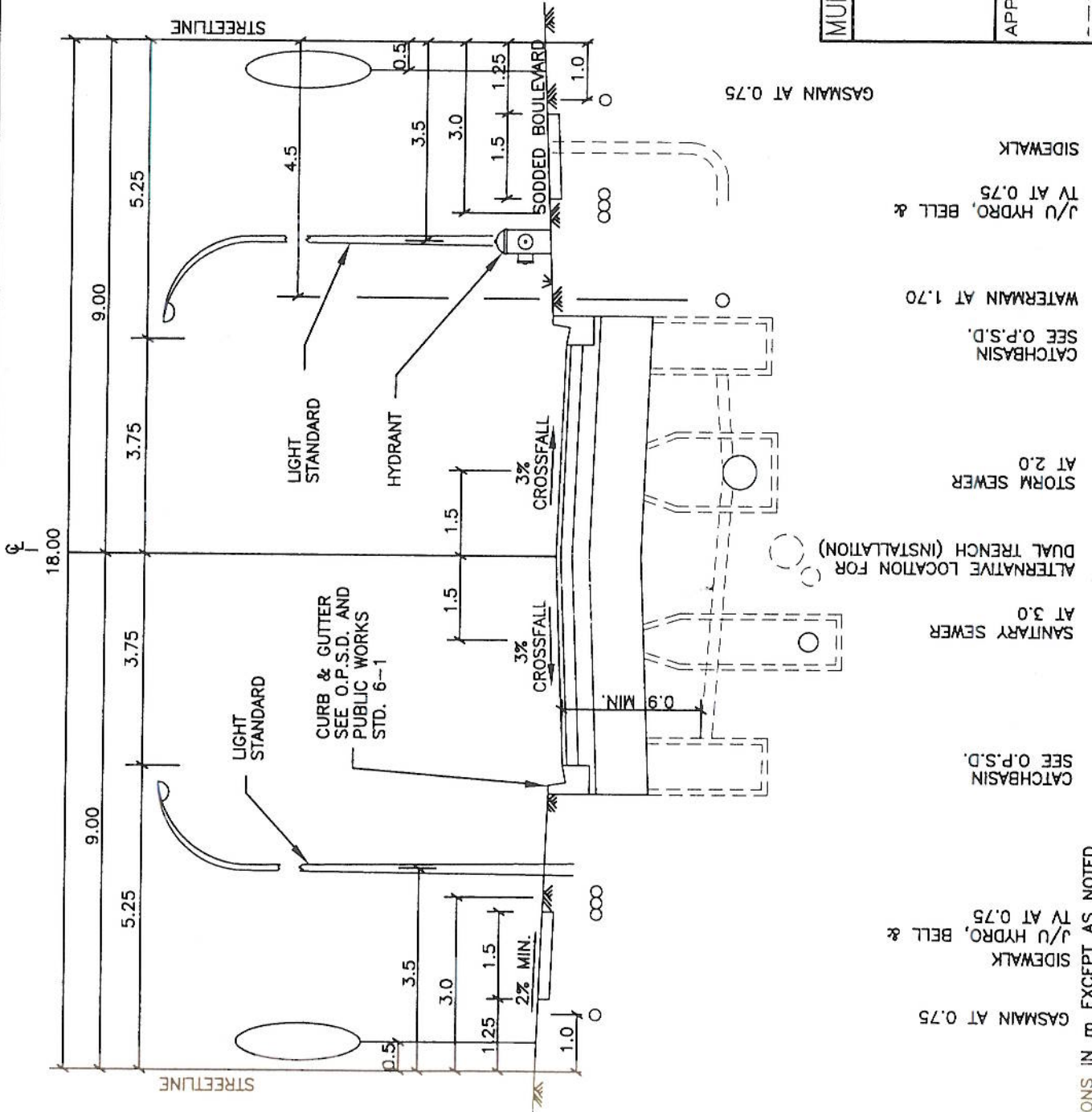
STD 6-8

REVISION DATE
07201995

DIRECTOR OF PUBLIC WORKS

DIMENSIONS IN mm EXCEPT AS NOTED

NOTE:
 FOR GENERAL NOTES AND ASPHALT REQUIREMENTS REFER TO STD. 7-2



MUNICIPALITY: TOWN OF OAKVILLE

STANDARD STREET SECTION FOR 18m ROAD ALLOWANCE

APPROVED: *[Signature]* **STD. 7-1**

REVISION DATE: MARCH 22, 2001

DIRECTOR OF PUBLIC WORKS

GASMAIN AT 0.75

SIDWALK

J/U HYDRO, BELL & TV AT 0.75

WATERMAIN AT 1.70

CATCHBASIN SEE O.P.S.D.

STORM SEWER AT 2.0

ALTERNATIVE LOCATION FOR DUAL TRENCH (INSTALLATION)

SANITARY SEWER AT 3.0

CATCHBASIN SEE O.P.S.D.

GASMAIN AT 0.75

SIDWALK

J/U HYDRO, BELL & TV AT 0.75

WATERMAIN AT 1.70

CATCHBASIN SEE O.P.S.D.

STORM SEWER AT 2.0

ALTERNATIVE LOCATION FOR DUAL TRENCH (INSTALLATION)

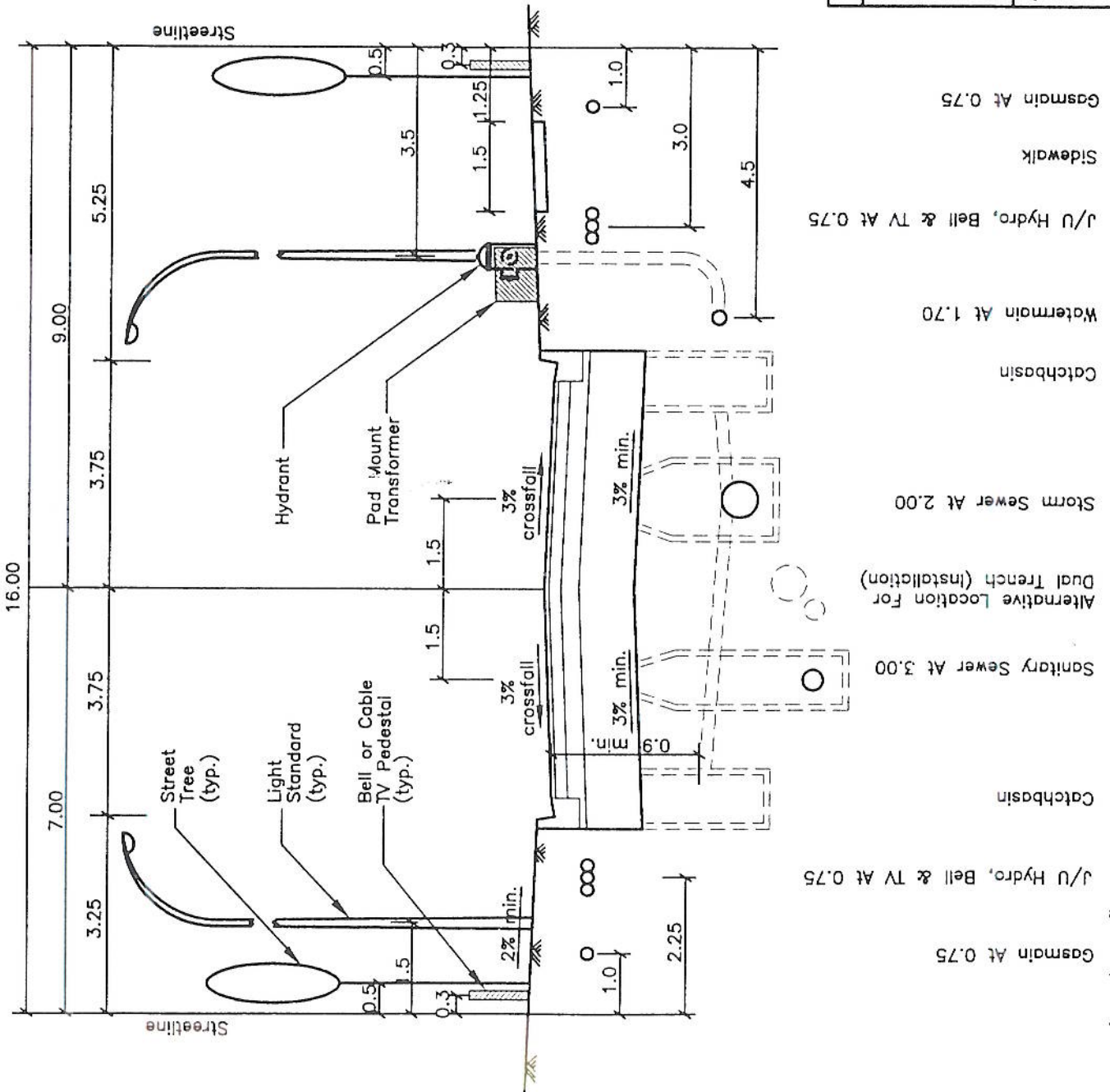
SANITARY SEWER AT 3.0

CATCHBASIN SEE O.P.S.D.

DIMENSIONS IN m EXCEPT AS NOTED

Notes

1. For additional notes and asphalt requirements refer to STD. 7-2.
2. STD. 7-1A applies to local residential streets serving less than 100 dwelling units.
3. Sidewalk may be deleted on a cul-de-sac without a park or walkway connection.
4. If sidewalk is required on both sides of the street, use STD. 7-1B.
5. 2m daylight triangles required at intersections.
6. Curb and Gutter is STD. 6-1 unless otherwise approved.

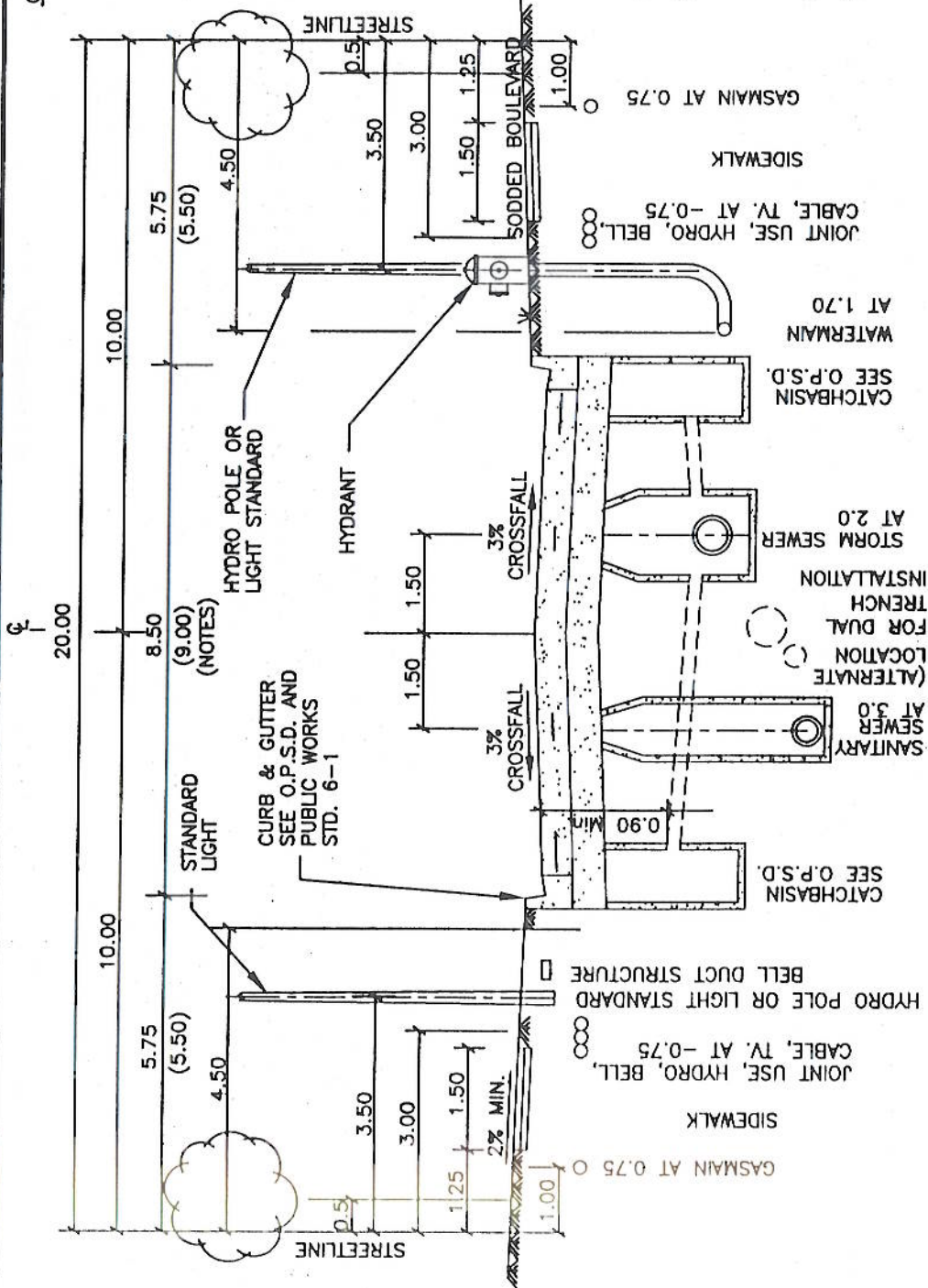


TOWN OF OAKVILLE	
STANDARD STREET SECTION FOR 16m ROAD ALLOWANCE	
APPROVED <i>[Signature]</i>	STD. 7-1A
REVISION DATE MARCH 22, 2001	
DIRECTOR OF PUBLIC WORKS	

Dimensions in m Except As Noted

GENERAL NOTES:

- 1.-THE ELEVATION AT STREET LINE FOR LOT DRAINAGE SHALL BE 150mm HIGHER THAN THE FINISHED ROAD CROWN.
- 2.-GRANULAR 'B' SUB-BASE THICKNESSES MAY BE REDUCED BY 75mm WHEN GROUND CONDITIONS CONSIDERED SUITABLE BY THE DIRECTOR OF PUBLIC WORKS.
- 3.-MAXIMUM ROAD GRADIENT 7%.
- 4.-ALL MATERIAL TO MEET ONTARIO PROVINCIAL STANDARD SPECIFICATIONS.
- 5.-WATERMANS AND SANITARY SEWERS TO CONFORM TO LATEST REGIONAL MUNICIPALITY OF HALTON SPECIFICATIONS AND REQUIREMENTS.
- 6.-ALL DRIVEWAYS BETWEEN CURB AND SIDEWALKS TO BE ASPHALTED.
- 7.-IF ANY TRENCH AFFECTS EITHER THE ROADWAY OR CURBS, THEN COMPACTED GRANULAR 'B' MATERIAL WILL BE RE-QUIRED FOR THE BACKFILL.
- 8.-9.00m PAVEMENT TO BE USED ON MINOR COLLECTOR AND LOCAL INDUSTRIAL ROADS.
- 9.-TOP COURSE ASPHALTIC CONCRETE SHALL BE ADDED TO THE ROAD ONLY AFTER ADJACENT BUILDINGS (HOMES, INDUSTRIAL COMMERCIAL, ETC.) HAVE BEEN CONSTRUCTED AND OR ONLY WITH THE SPECIFIC CONSENT OF THE DIRECTOR OF PUBLIC WORKS.
- 10.-FULL LENGTH SUB-DRAINS ARE TO BE INSTALLED.
- 11.-AN EXTRA 150mm THICKNESS OF GRANULAR 'B' SHALL BE ADDED AT ARTERIAL AND INDUSTRIAL ROAD INTERSECTIONS. THIS EXTRA DEPTH SHALL BE EXTENDED FOR A MINIMUM OF 15mm FROM THE PROPERTY LINE OF THE INTERSECTING STREET.
- 12.-SUB-GRADE CROSS-FALL SHALL BE 3 PERCENT.
- 13.-SODDING REQUIREMENTS TO CONFORM TO OPSS 570 AND 571.



MUNICIPALITY: TOWN OF OAKVILLE

STANDARD STREET SECTION FOR 20m ROAD ALLOWANCE

APPROVED: *[Signature]* DIRECTOR OF PUBLIC WORKS

STD. 7-2

REVISION DATE: MAY 1, 2003

ASPHALT REQUIREMENTS:

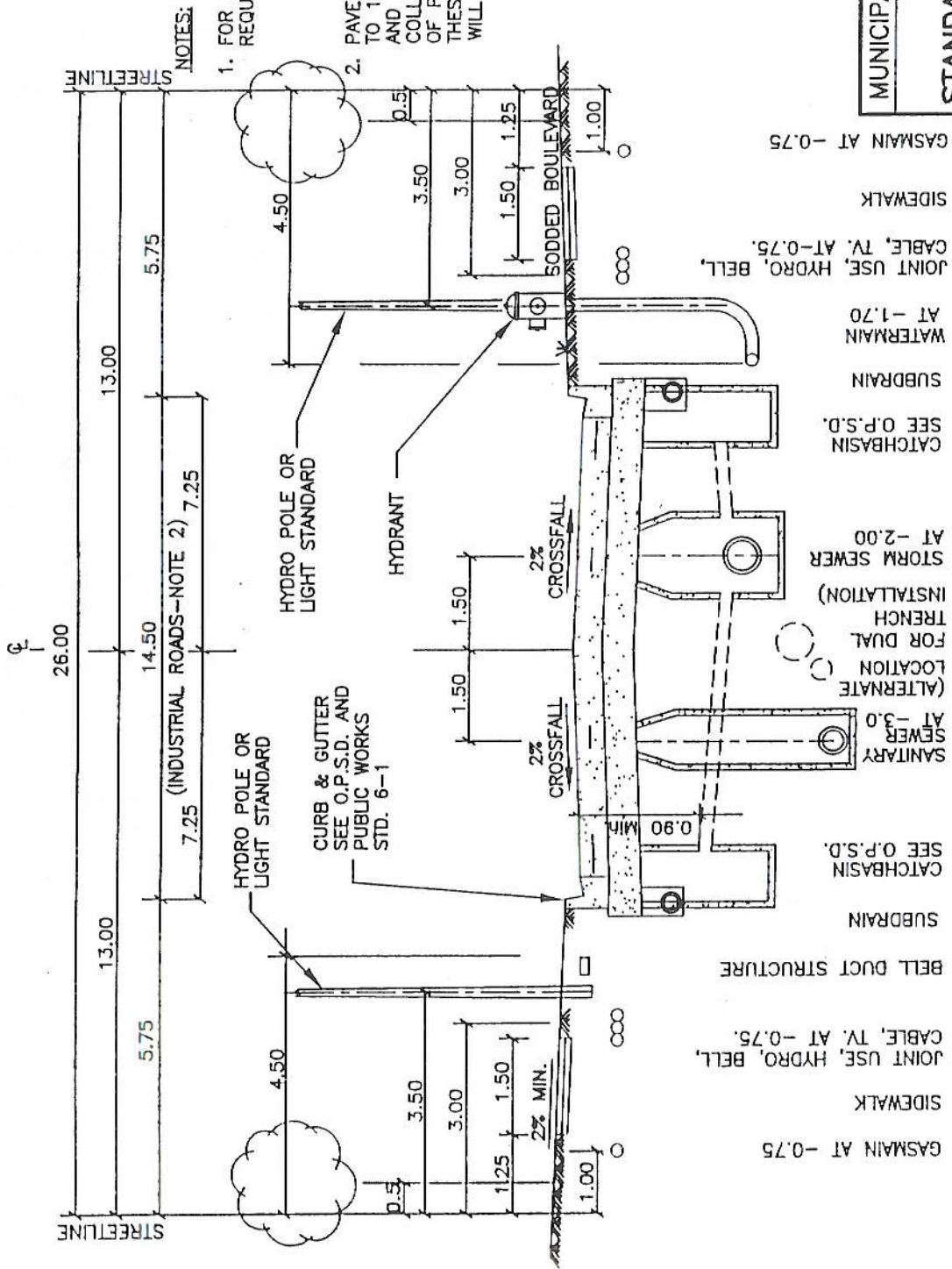
A.-INDUSTRIAL AND COLLECTOR ROADS OR BUS ROUTES
 40mm HL 3
 80mm HL 8

B.-RESIDENTIAL ROADS (NO BUSES)
 40mm HL 3
 50mm HL 8

C.-DRIVEWAYS
 50mm DRIVEWAYS MIX ASPHALT (HL-3A)

GRANULAR BASE REQUIRED:
 A.-ALL ROADS
 150mm OF GRANULAR 'A' MATERIAL
 350mm OF GRANULAR 'B' SUB-BASE (SEE NOTE 2)
 B.-DRIVEWAYS
 150mm OF 19mm CRUSHER RUN STONE

DIMENSIONS IN m EXCEPT AS NOTED



NOTES:

1. FOR GENERAL NOTES AND ASPHALT REQUIREMENTS REFER TO STD. 7-2.
2. PAVEMENT WIDTH MAY BE REDUCED TO 12.50m FOR INDUSTRIAL ARTERIALS AND TO 10.00m FOR INDUSTRIAL COLLECTORS SUBJECT TO DIRECTOR OF PUBLIC WORKS APPROVAL IN THESE CASES BOULEVARD WIDTHS WILL VARY.

MUNICIPALITY: TOWN OF OAKVILLE

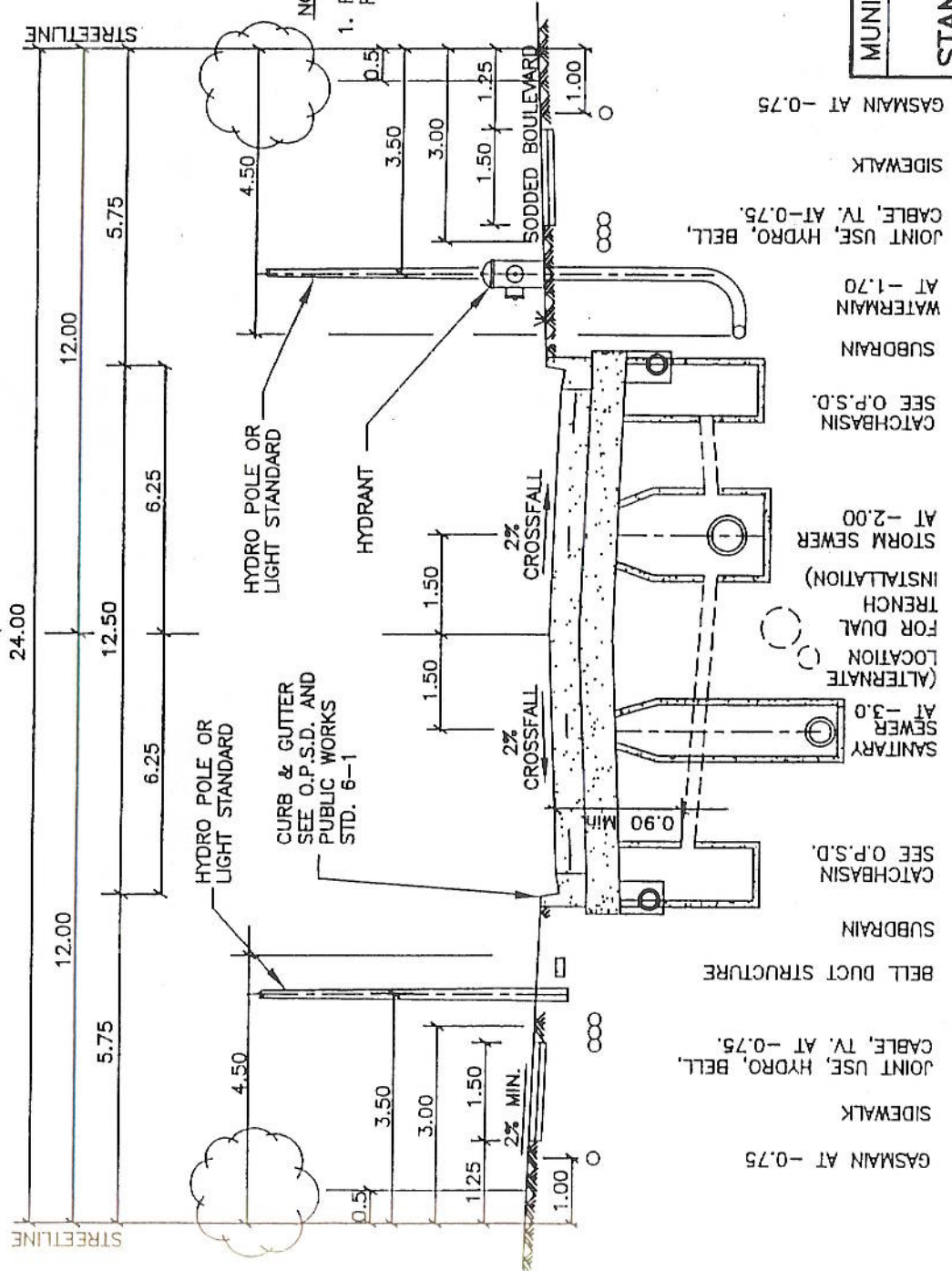
STANDARD STREET SECTION FOR 26m ROAD ALLOWANCE

APPROVED *[Signature]* **STD. 7-3**

DIRECTOR OF PUBLIC WORKS

REVISION DATE
JAN. 9, 2003

DIMENSIONS IN m EXCEPT AS NOTED



NOTES:
1. FOR GENERAL NOTES AND ASPHALT REQUIREMENTS REFER TO STD. 7-2.

MUNICIPALITY: TOWN OF OAKVILLE

STANDARD STREET SECTION FOR 24m ROAD ALLOWANCE

APPROVED: *[Signature]*
DIRECTOR OF PUBLIC WORKS

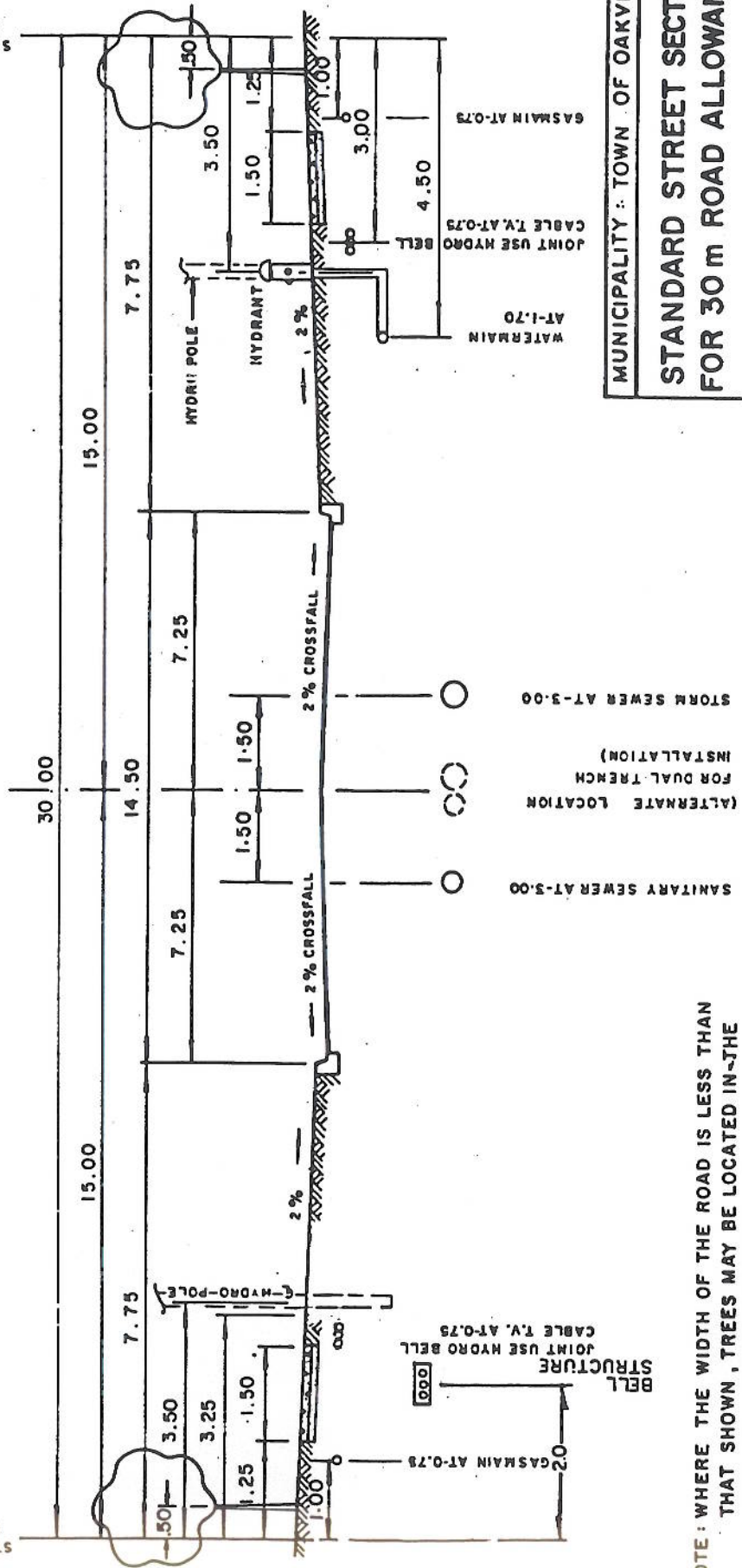
STD. 7-3a

REVISION DATE
JAN. 9, 2003

DIMENSIONS IN m EXCEPT AS NOTED

STREET
LINE

STREET
LINE



MUNICIPALITY : TOWN OF OAKVILLE

**STANDARD STREET SECTION
FOR 30 m ROAD ALLOWANCE**

APPROVED: *[Signature]*
DIRECTOR OF PUBLIC WORKS

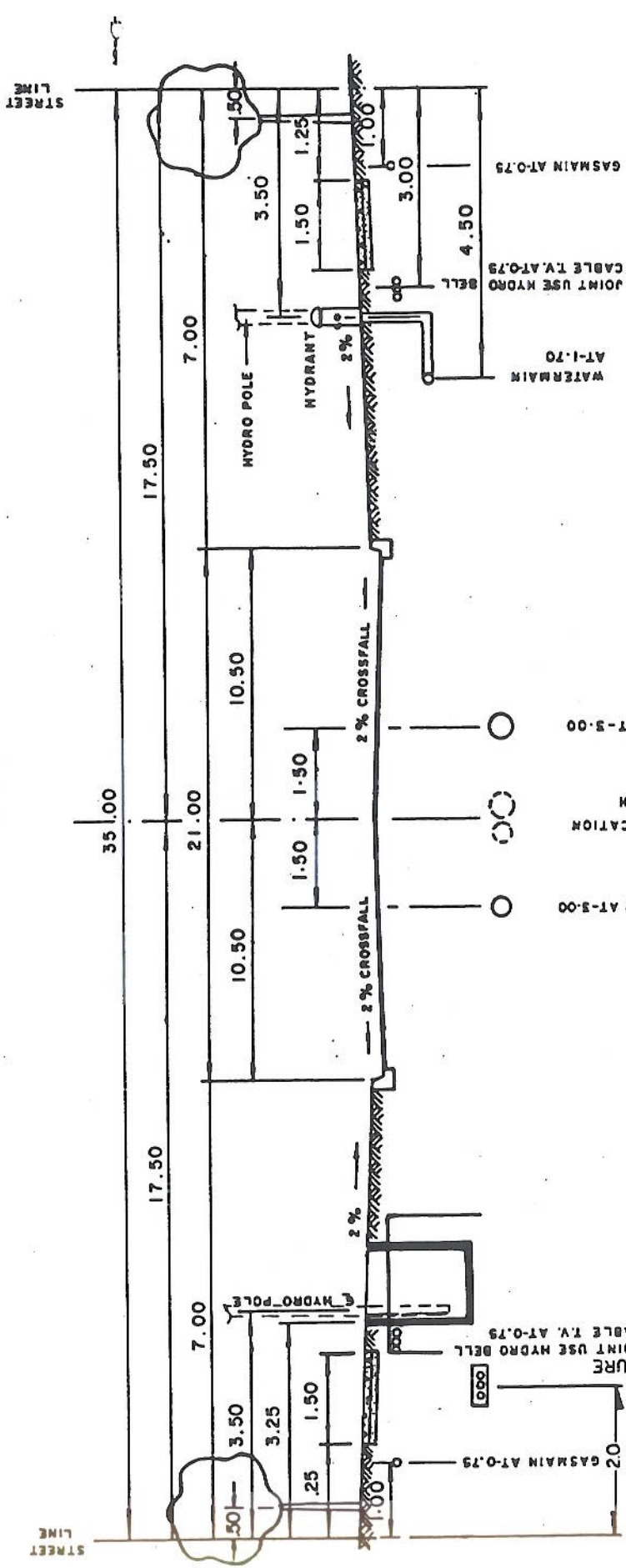
STD.7-4
REVISION DATE: 07201995

NOTE: WHERE THE WIDTH OF THE ROAD IS LESS THAN THAT SHOWN, TREES MAY BE LOCATED IN THE BOULEVARD - SUBJECT TO APPROVAL OF THE DIRECTOR OF PUBLIC WORKS.

- STREET LIGHTING SUBJECT TO SPECIAL DESIGN.

- FOR GENERAL NOTES REFER TO STD 7-2

DIMENSIONS IN m EXCEPT AS NOTED



MUNICIPALITY: TOWN OF OAKVILLE

STANDARD STREET SECTION FOR 35m ROAD ALLOWANCE

APPROVED: *[Signature]*
DIRECTOR OF PUBLIC WORKS

REVISION DATE: 07/20/1995

STD.7-5

NOTE: WHERE THE WIDTH OF THE ROAD IS LESS THAN THAT SHOWN, TREES MAY BE LOCATED IN THE BOULEVARD - SUBJECT TO THE APPROVAL OF THE DIRECTOR OF PUBLIC WORKS.

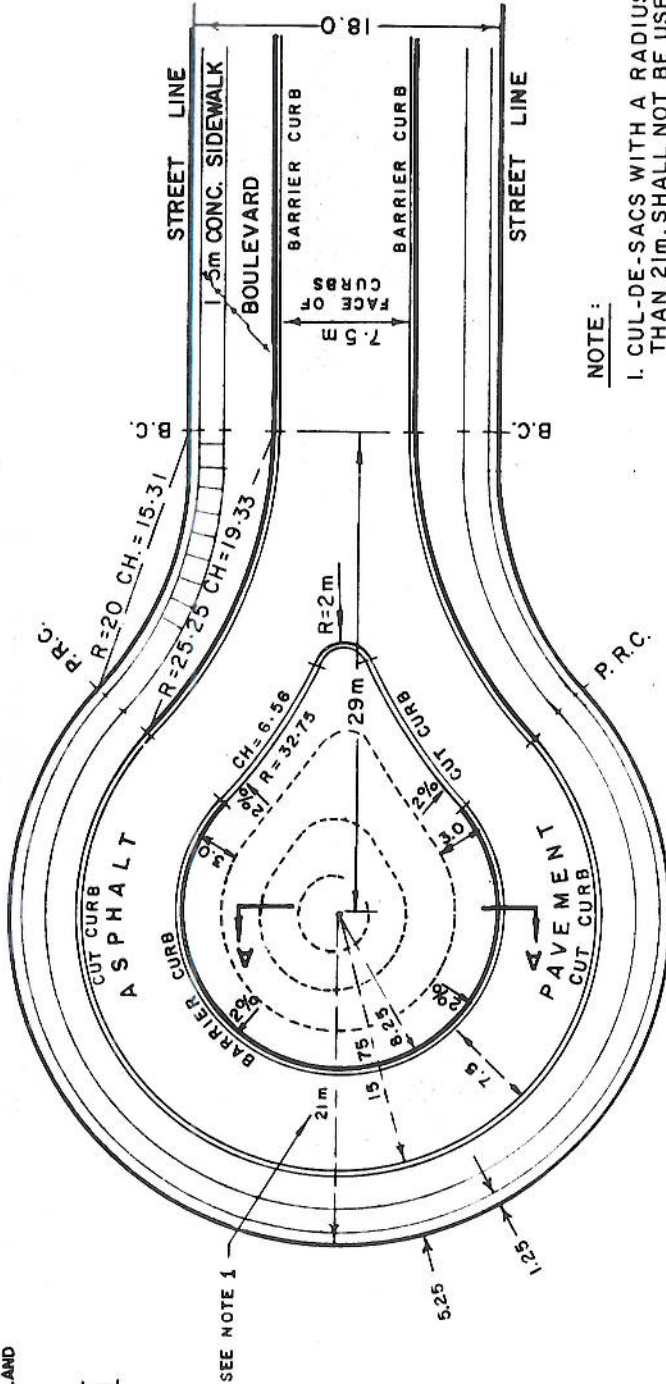
- STREET LIGHTING SUBJECT TO SPECIAL DESIGN,

- FOR GENERAL NOTES REFER TO STD 7-2

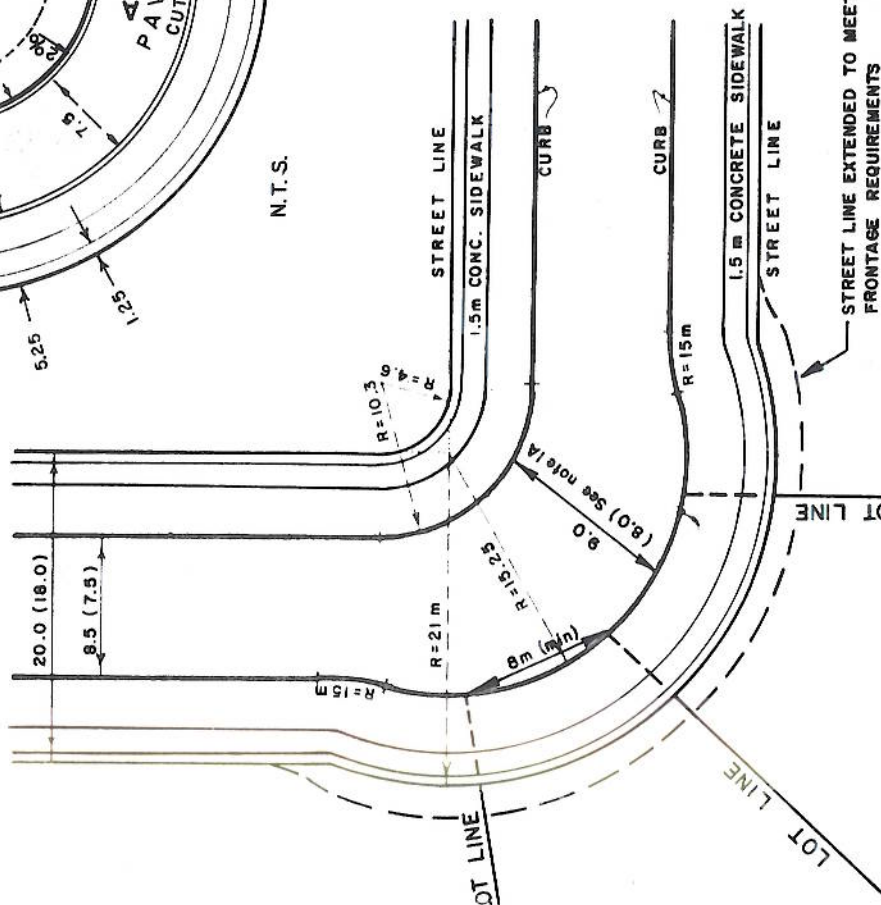
DIMENSIONS IN M EXCEPT AS NOTED



SECTION A - A
FOR ISLAND GRADING



N.T.S.



DIMENSIONS IN m EXCEPT AS NOTED

NOTE:

1. CUL-DE-SACS WITH A RADIUS OTHER THAN 21m, SHALL NOT BE USED WITHOUT DEPT. OF PUBLIC WORKS APPROVAL
2. ISLAND LANDSCAPING IS TO MEET THE REQUIREMENTS OF THE PARKS & RECREATION DEPARTMENT.
3. ISLAND GRADING IS TO MEET THE REQUIREMENTS OF THE DEPARTMENT OF PUBLIC WORKS.
4. ON ROADS WITH TOWNHOUSES, THE MINIMUM ROAD ALLOWANCE IS 20 m, MIN. PAVEMENT WIDTH TO BE 8.5 m AND ISLAND RADIUS TO BE 7.25 m.

NOTES:

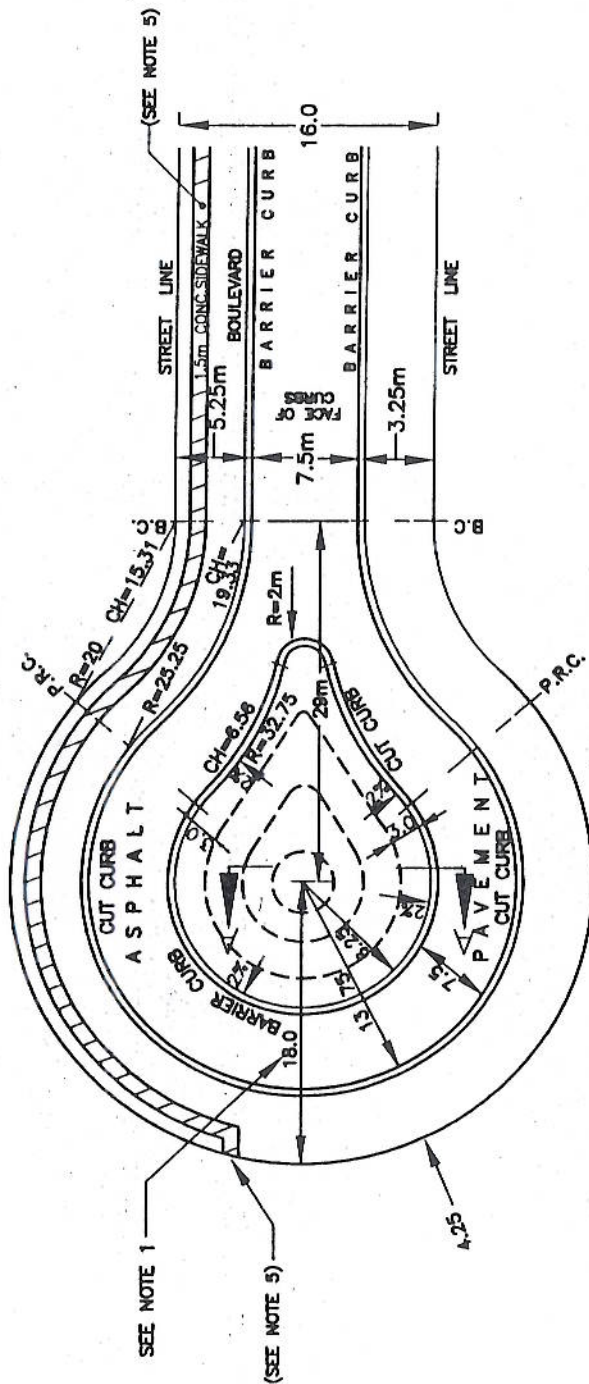
- FOR TURNING BAYS WHERE STREET LINE HAS BEEN EXTENDED TO PROVIDE LOT FRONTAGE REQUIREMENTS:
- 1A. MINIMIZE PAVEMENT WIDTH AT BEND, COMPATIBLE WITH PROJECTION OF COMMON LOT LINES TO THE CURB TO PROVIDE MINIMUM CHORD OF 8m AT THE CURB.
 - 2A. SIDEWALK IS TO PARALLEL CURB TO MAINTAIN BOULEVARD WIDTH WITH THAT OF STRAIGHT ROAD SECTION.

MUNICIPALITY : TOWN OF OAKVILLE

**CUL - DE - SAC
AND
TURNING BAY**

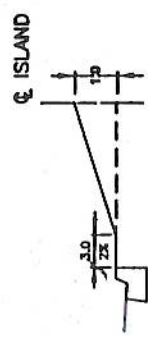
APPROVED 	STD. 7-6
	REVISION DATE 07201995

DIRECTOR OF PUBLIC WORKS



NOTES:

1. CUL-DE-SACS WITH A RADIUS OTHER THAN 21m SHALL NOT BE USED WITHOUT DEPT. OF PUBLIC WORKS APPROVAL.
2. ISLAND LANDSCAPING IS TO MEET THE REQUIREMENTS OF THE PARKS & RECREATION DEPARTMENT.
3. ISLAND GRADING IS TO MEET THE REQUIREMENTS OF THE DEPARTMENT OF PUBLIC WORKS.
4. ON ROADS WITH TOWNHOUSES, THE MINIMUM ROAD ALLOWANCE IS 20m, MIN. PAVEMENT WIDTH TO BE 6.5m AND ISLAND RADIUS TO BE 7.25m.
5. SIDEWALK ONE SIDE ONLY IF REQUIRED AS A CONNECTION TO A WALKWAY, OTHERWISE SIDEWALK NOT REQUIRED ON A 16m CUL-DE-SAC SUBJECT TO APPROVAL OF THE DIRECTOR OF PUBLIC WORKS. SIDEWALK IS TO PARALLEL CURB TO MAINTAIN BOULEVARD WIDTH WITH THAT OF STRAIGHT ROAD SECTION.
6. ISLAND MAY BE REMOVED SUBJECT TO APPROVAL OF THE DIRECTOR OF PUBLIC WORKS.



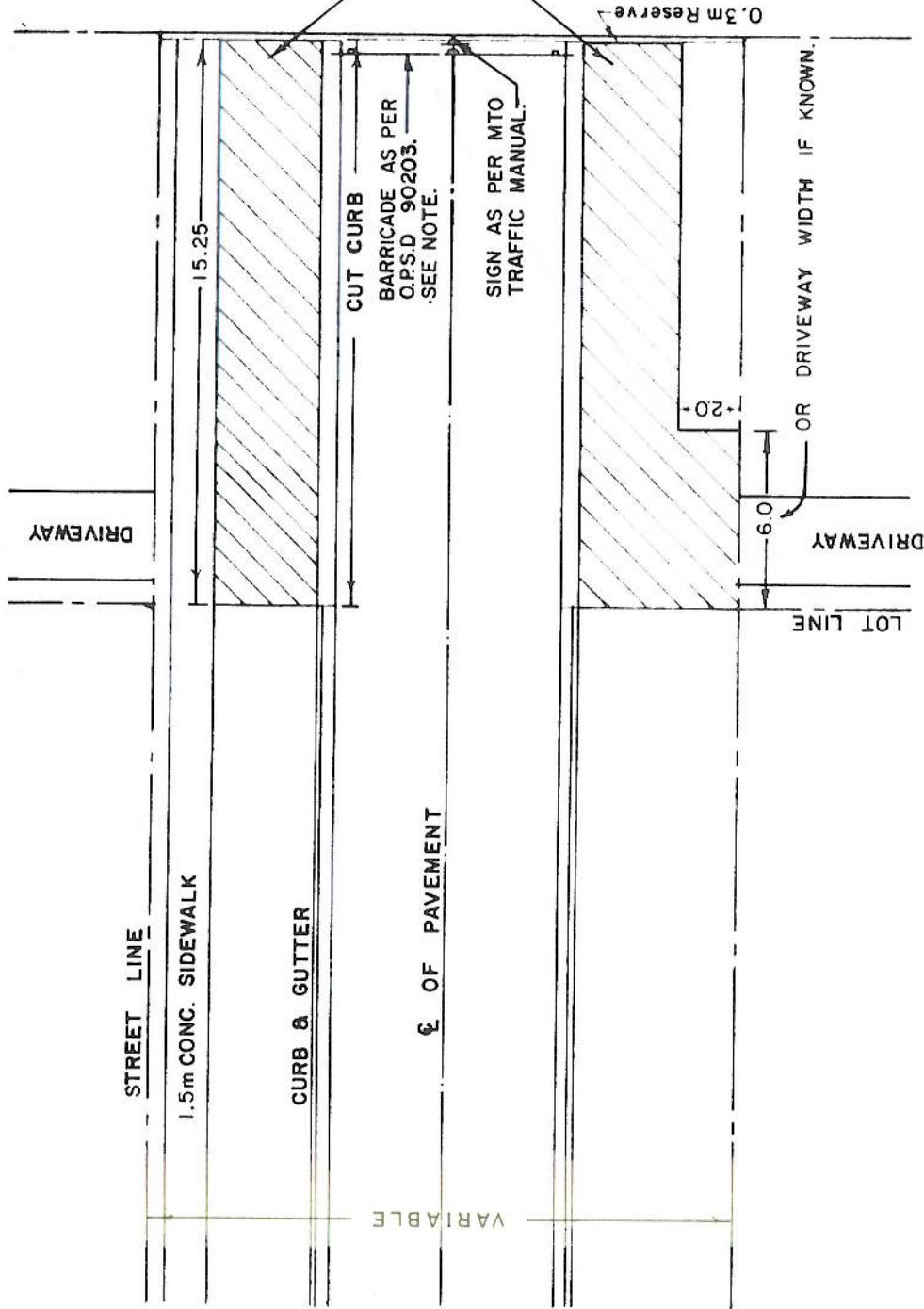
MUNICIPALITY: TOWN OF OAKVILLE

CUL-DE-SAC
FOR 16M ROAD ALLOWANCE

APPROVED *[Signature]*
DIRECTOR OF PUBLIC WORKS

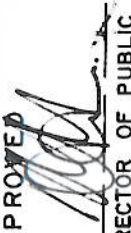
STD. 7-6d

REVISION DATE
FEBRUARY 19
2003



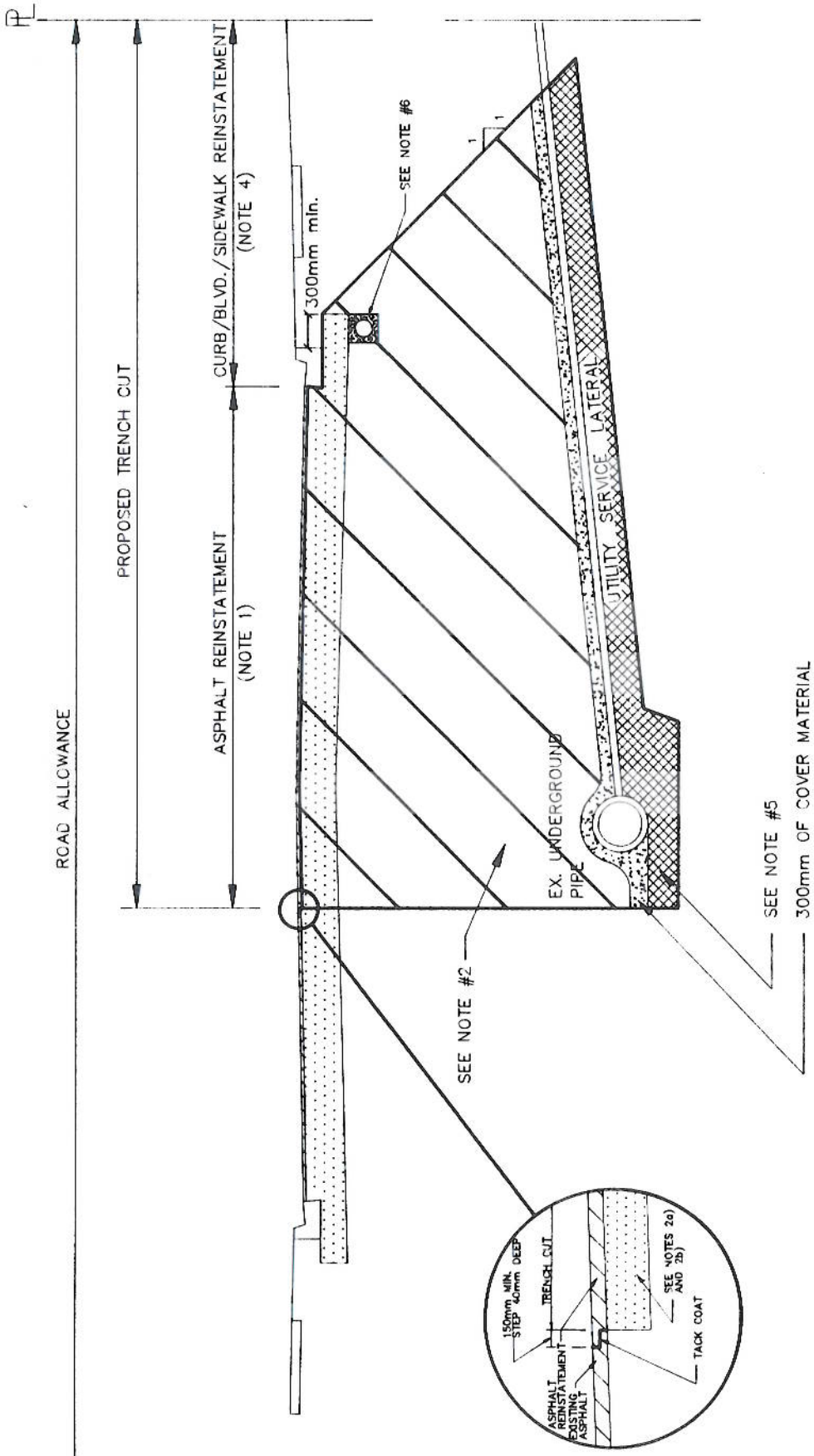
HATCHED AREAS TO BE EXCAVATED, BACKFILLED AND ASPHALTED AS PER STANDARD ROAD SPECIFICATION AND CROSS-SECTION.

NOTE:
 1- WHEN ROAD IS EXTENDED BY FUTURE DEVELOPMENT, THE EXISTING PAVED BOULEVARD AND CUT CURB AREAS TO BE REMOVED AND RESTORED TO NORMAL BOULEVARD AND CURB STANDARD BY THE FUTURE DEVELOPER.
 2- IF 2 STAGE HEIGHT RESTRICTED BARRICADE IS REQUIRED, SEE STANDARD 7-7A.

MUNICIPALITY: TOWN OF OAKVILLE	
TYPICAL TURN AROUND FOR TEMPORARY DEAD - END STREETS	
APPROVED 	STD. 7-7
DIRECTOR OF PUBLIC WORKS	REVISION DATE 07201995

NOTE: DRIVEWAYS TO BE LOCATED ON SIDE OF LOT REMOTE FROM ROAD TERMINUS.

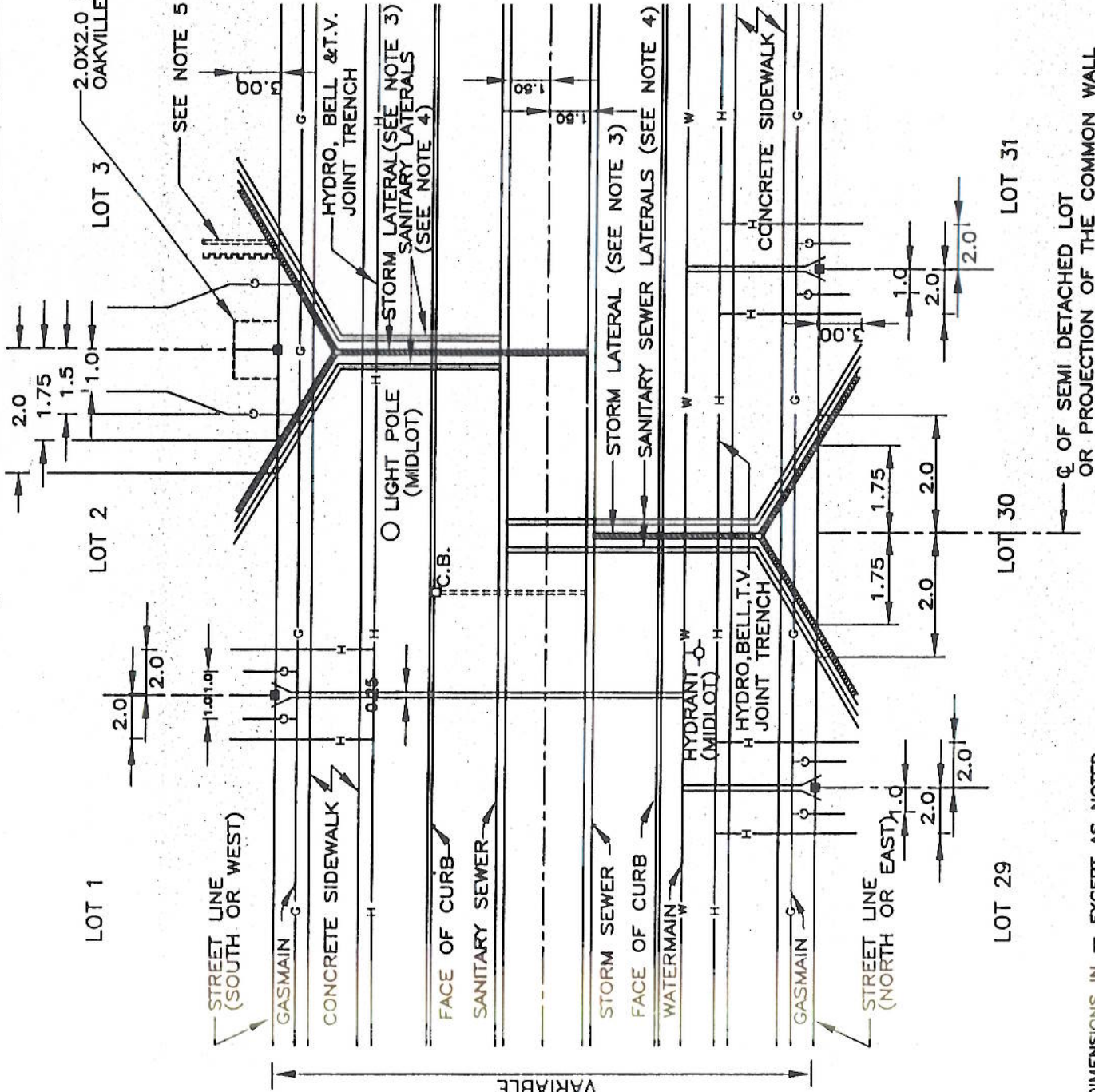
DIMENSIONS IN m EXCEPT AS NOTED



NOTES:

- 1) ASPHALT PAVEMENT REINSTATEMENT TO ORIGINAL PAVEMENT DEPTH
- 2) a) UNSHRINKABLE FILL (28 DAY STRENGTH - 0.4MPa) FOR ARTERIAL AND COLLECTOR ROADS
b) COMPACTED GRANULAR (SEE TRENCH PERMIT FOR CONDITIONS) OR UNSHRINKABLE FILL FOR LOCAL ROADS
- 3) FOR TEMPORARY COLD MIX ASPHALT REINSTATEMENT, BACKFILL 2a) AND 2b) TO 50mm OF FINISHED GRADE AND PLACE MINIMUM 50mm COLD MIX ASPHALT
- 4) CURB AND BLVD. REINSTATEMENT AS PER APPLICABLE ONTARIO PROVINCIAL STANDARD SPECIFICATIONS AND DRAWINGS. SIDEWALK RESTORATION AS PER STD. 6-3.
- 5) BEDDING AND COVER PER UTILITY STANDARD
- 6) REINSTATE SUB-DRAIN BACKFILL WITH 13mm CLEAR STONE, 75mm COVER ALL AROUND

MUNICIPALITY: TOWN OF OAKVILLE	
ROAD CUT RESTORATION DETAIL	
APPROVED: DIRECTOR OF PUBLIC WORKS	STD 7-8 REVISION DATE 07201995



2.0x2.0 EASEMENT CENTERED ON LOT LINE FOR OAKVILLE HYDRO PAD MOUNT TRANSFORMER.

NOTES:

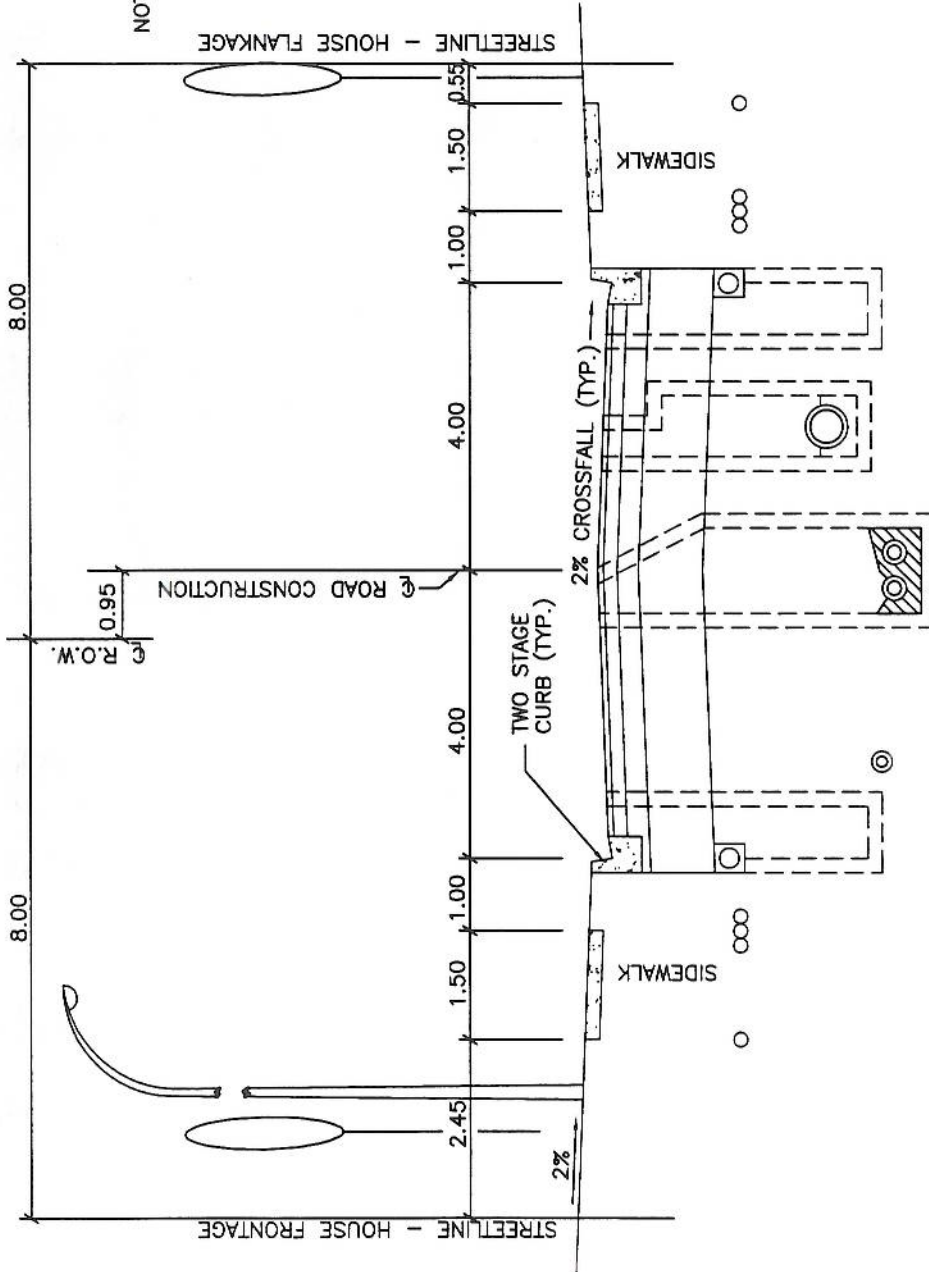
1. FOR SANITARY SEWERS AND WATERMAIN SPECIFICATIONS REFER TO THE REGIONAL MUNICIPALITY OF HALTON.
2. TREES TO BE PLANTED 0.50m OFF THE STREET LINE.
3. STORM SEWER LATERALS ARE TO BE 150mm DIA. EXTRA STRENGTH CONCRETE PIPE, OR WHITE COLOURED P.V.C. PIPE SDR 28 FOR CONNECTIONS FROM PROPERTY LINE TO MAIN SEWER LINE.
4. IF P.V.C. IS USED FOR SANITARY SEWER LATERALS, ANY COLOUR OTHER THAN WHITE IS TO BE USED.
5. FOR STREET TOWN HOUSES, THE STORM AND SANITARY LATERALS ARE TO HAVE A 45' LONG RADIUS BEND AT THE STREET LINE AND THE PIPES EXTENDED 3m INTO THE LOT, PERPENDICULAR TO THE STREET LINE.
6. PROVIDE MAXIMUM DEPTH OF COVER FOR LATERALS AT STREET LINE.

MUNICIPALITY: TOWN OF OAKVILLE	
TYPICAL LOCATION OF UNDERGROUND UTILITIES FOR LOT SERVICING	
APPROVED DIRECTOR OF PUBLIC WORKS	STD. 7-9 REVISION DATE MAY 1, 2003

DIMENSIONS IN m EXCEPT AS NOTED

A) - Q OF SEMI DETACHED LOT OR PROJECTION OF THE COMMON WALL

- NOTE: 1) STANDARD IS APPROVED FOR USE ONLY WITH WRITTEN APPROVAL OF THE DIRECTOR OF PUBLIC WORKS
- 2) FOR GENERAL NOTES REFER TO 20m ROAD ALLOWANCE STANDARD
- 3) FOUNDATION DRAIN COLLECTOR AND SANITARY SEWER ARE TO HAVE INDIVIDUAL MANHOLES
- 4) SERVICES FOR LOTS TO BE IN ACCORDANCE WITH STANDARD LOT ENTRY DRAWING
- 5) FOR LANE DETAIL REFER TO STD. 7-13(b)
- 6) ALL DIMENSIONS ARE IN METRES



OFFSET FROM Q. ROAD CONSTRUCTION	OFFSET FROM STREETLINE	PROPERTY LINE	STREET TREE CORRIDOR	HYDRANT/STREET LIGHT AND PEDESTALS	GASMAN	JOINT USE UNDERGROUND CABLE	WATERMAN	FOUNDATION DRAIN COLLECTOR	SANITARY SEWER	STORM SEWER	JOINT USE UNDERGROUND CABLE	GASMAN (ALT.)	STREET TREE	PROPERTY LINE											
8.95	0.00		1.20	7.75	7.20	2.45	6.50	6.20	2.75	6.20	2.75	8.70	0.25	6.80	0.25	6.80	0.25	5.05	2.00	5.05	2.05	6.50	6.50	6.85	7.05

MUNICIPALITY: TOWN OF OAKVILLE

INTERIM STREET SECTION FOR 16m ROAD ALLOWANCE

APPROVED: *[Signature]*

STANDARD: STD. 7-13(a)

REVISION DATE: JULY 20 1995

DIRECTOR OF PUBLIC WORKS

GENERAL NOTES:

- 1 THE ELEVATION AT STREET LINE FOR LOT DRAINAGE SHALL BE 150mm HIGHER THAN THE FINISHED ROAD CROWN.
 - 2 ALL MATERIALS SHALL MEET OR EXCEED ONTARIO PROVINCIAL STANDARD AND TOWN STANDARD SPECIFICATIONS.
 - 3 WATERMANS AND SANITARY SEWERS TO CONFORM TO LATEST REGIONAL MUNICIPALITY OF HALTON SPECIFICATIONS AND REQUIREMENTS.
- DRIVEWAYS
- 4 RESIDENTIAL DRIVEWAY APRONS BETWEEN THE SIDEWALK AND THE ROAD CURB SHALL BE CONSTRUCTED WITH 100mm CONCRETE AND 75mm OF 19mm CRUSHER RUN LIMESTONE.
 - 5 ALL DRIVEWAYS BETWEEN CURB AND SIDEWALK PLAIN CONCRETE.
- STREET SECTION DETAILS
- 6 MAXIMUM ROADWAY PROFILE GRADIENT SHALL BE 6%. MINIMUM ROADWAY PROFILE GRADIENT SHALL BE 0.5%.
 - 7 SUB-GRADE SHALL HAVE A CROSS-FALL OF -3% FROM CENTRELINE OF ROAD.
 - A. CROSS-FALL OF:
 - 3% FROM CENTRELINE OF ROAD (for pavement widths of 8.5m or less)
 - 2% FROM CENTRELINE OF ROAD (for pavement widths greater than 8.5m)
 - 8 TOP COURSE ASPHALTIC CONCRETE SHALL BE PLACED ONLY AFTER ADJACENT BUILDINGS (HOMES, INDUSTRIAL, COMMERCIAL, ETC) HAVE BEEN CONSTRUCTED AND ONLY WITH THE CONSENT OF THE DIRECTOR OF ENGINEERING AND CONSTRUCTION.
 - 9 FULL LENGTH SUB-DRAINS ARE TO BE INSTALLED ON BOTH SIDES OF THE ROAD.
 - 10 CONCRETE CURBS SHALL BE OPSD 600.060 FOR STANDARD STREET SECTION STD. 7-21A AND 7-22B (LANEWAYS).
 - 11 CONCRETE CURBS SHALL BE OPSD 600.040 FOR ALL STANDARD STREET SECTIONS EXCEPT STD. 7-21A AND 7-22B. OPSD 600.070 SHALL BE USED IN LIEU OF 600.040 IN NEW DEVELOPMENT AREAS WHERE TWO STAGE CURB AND GUTTER IS REQUIRED.
 - 12 FARTHER END BOULEVARD AREAS SHALL BE OVERLAIN WITH 200mm TOPSOIL AND NO. 1 NURSEY SOD PER PARKS AND OPEN SPACE DEPARTMENT SPECIFICATIONS.
 - 13 SIDEWALKS SHALL CONFORM TO OPSD 310.010.
 - 14 SIDEWALK RAMP AT INTERSECTIONS AND MID-BLOCK CROSSINGS SHALL CONFORM TO OPSD 310.030 WITH THE REQUIREMENT THAT THE RAMP GRADIENT SHALL NOT EXCEED 5%.

ASPHALT AND GRANULAR REQUIREMENTS:

- A. LANEWAYS and LOCAL ROADS (not supporting Transit)
 - 40mm HL3 (PGAC 58-28) *
 - 50mm HL8 (PGAC 58-28) *
 - 150mm GRANULAR 'A' *** (a)
 - 350mm** GRANULAR 'B' *** (b)
- B. LOCAL EMPLOYMENT ROADS (not supporting Transit)
 - 40mm HL3 (PGAC 58-28) *
 - 80mm HL8 (PGAC 58-28) *
 - 150mm GRANULAR 'A' *** (a)
 - 350mm** GRANULAR 'B' *** (b) (c)
- C. CONNECTOR ROADS and LOCAL ROADS (supporting Transit)
 - 40mm HL3 HS (PGAC 64-22) *
 - 80mm HL8 (PGAC 64-22) *
 - 150mm GRANULAR 'A' *** (a)
 - 350mm** GRANULAR 'B' *** (b) (c)
- D. - AVENUES and MINOR ARTERIAL ROADS
 - 40mm HL3 HS (PGAC 64-22) *
 - 100mm HD8C (PGAC 64-22) *
 - 150mm GRANULAR 'A' *** (a)
 - 350mm** GRANULAR 'B' *** (b) (c)

* - ALL HOT LAID ASPHALTIC CONCRETE SHALL MEET OR EXCEED OPS 1150.

** - WHERE THE PROJECT OR DEVELOPMENT GEOTECHNICAL REPORT SPECIFIES A GREATER THICKNESS, THAT SPECIFIED THICKNESS SHALL BE THE REQUIREMENT.

*** - ALL GRANULAR A AND GRANULAR B MATERIALS - GC TESTING SHALL BE UNDERTAKEN BY THE CONTRACTOR COMPLETING THE WORKS AS PER RELEVANT OPS SPECIFICATIONS. ALL PROJECT ADMINISTRATORS AND DEVELOPERS ARE REQUIRED TO PERFORM QA TESTING PER RELEVANT OPS SPECIFICATIONS AND THE RESULTS OF THE QA TESTING WILL DETERMINE THE ACCEPTANCE OR REJECTION OF PLACED MATERIALS.

(c) AN EXTRA 150mm THICKNESS SHALL BE PLACED WITHIN ARTERIAL AND INDUSTRIAL ROAD INTERSECTIONS. THE EXTRA THICKNESS SHALL EXTEND FOR A MINIMUM OF 15m BEYOND THE PROPERTY LINE OF THE INTERSECTING STREET.

(a) - GRANULAR 'A' TO MEET OR EXCEED OPS 1010 AND SHALL BE QUARRIED BEDROCK OR RECYCLED CONCRETE MATERIAL. 30% RAP MAY BE PRESENT IN GRANULAR 'A'. MATERIAL STEEL SLAG NOT PERMITTED IN GRANULAR 'A'.

(b) - GRANULAR 'B' TYPE II SHALL BE 100% QUARRIED BEDROCK MEETING OR EXCEEDING OPS 1010. GRANULAR 'B' TYPE I COMPRISED OF 100% RECYCLED CONCRETE MEETING OR EXCEEDING OPS 1010 MAY BE USED IN LIEU OF GRANULAR 'B' TYPE II. NEITHER FURNACE SLAG NOR NICKEL SLAG IS PERMITTED FOR USE IN GRANULAR 'B' TYPE II OR TYPE I MATERIAL.

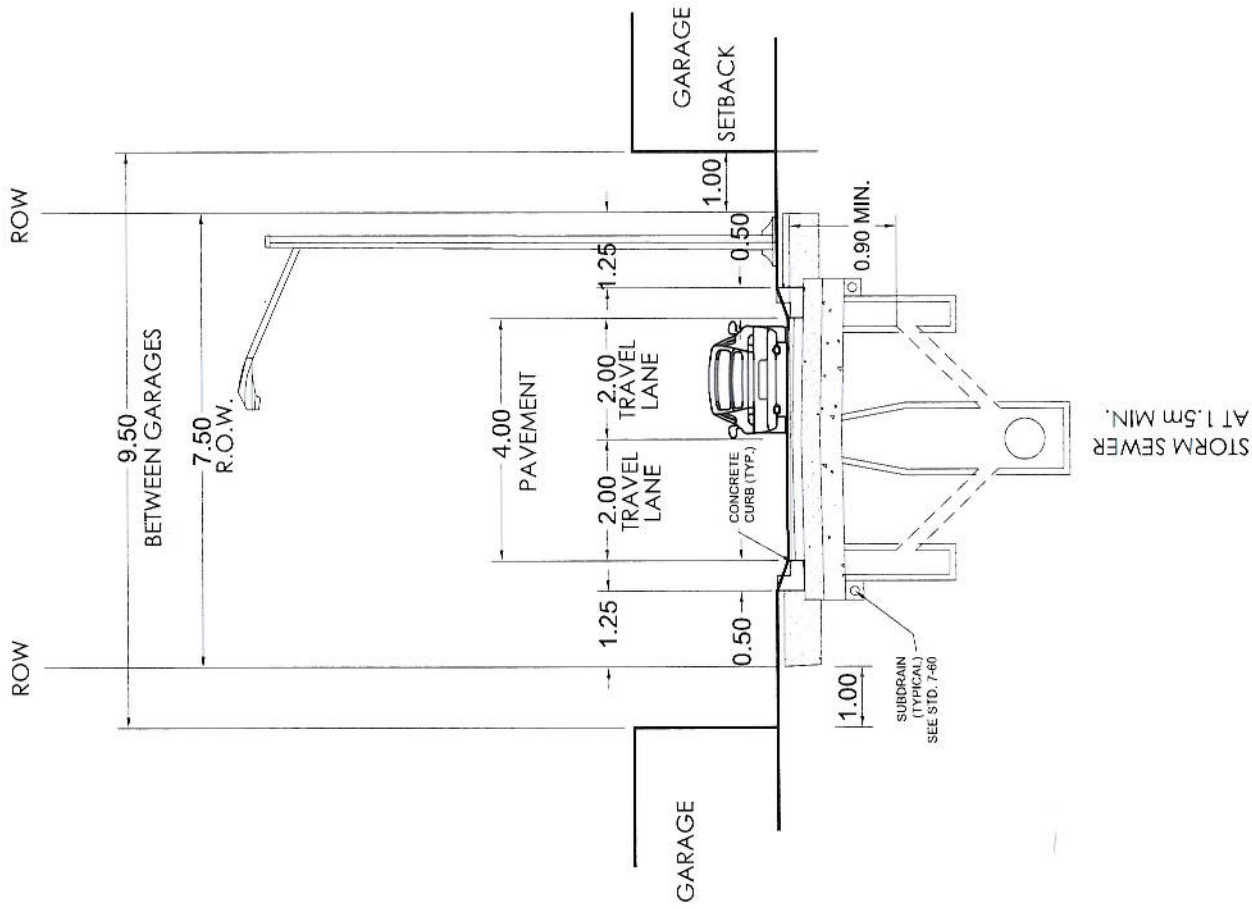
TOWN OF OAKVILLE

STANDARD STREET SECTION
GENERAL NOTES APPLICABLE
TO ALL STANDARD STREET SECTIONS

APPROVED


STD 7-20
REVISION DATE
August, 2009

DIRECTOR OF ENGINEERING AND CONSTRUCTION

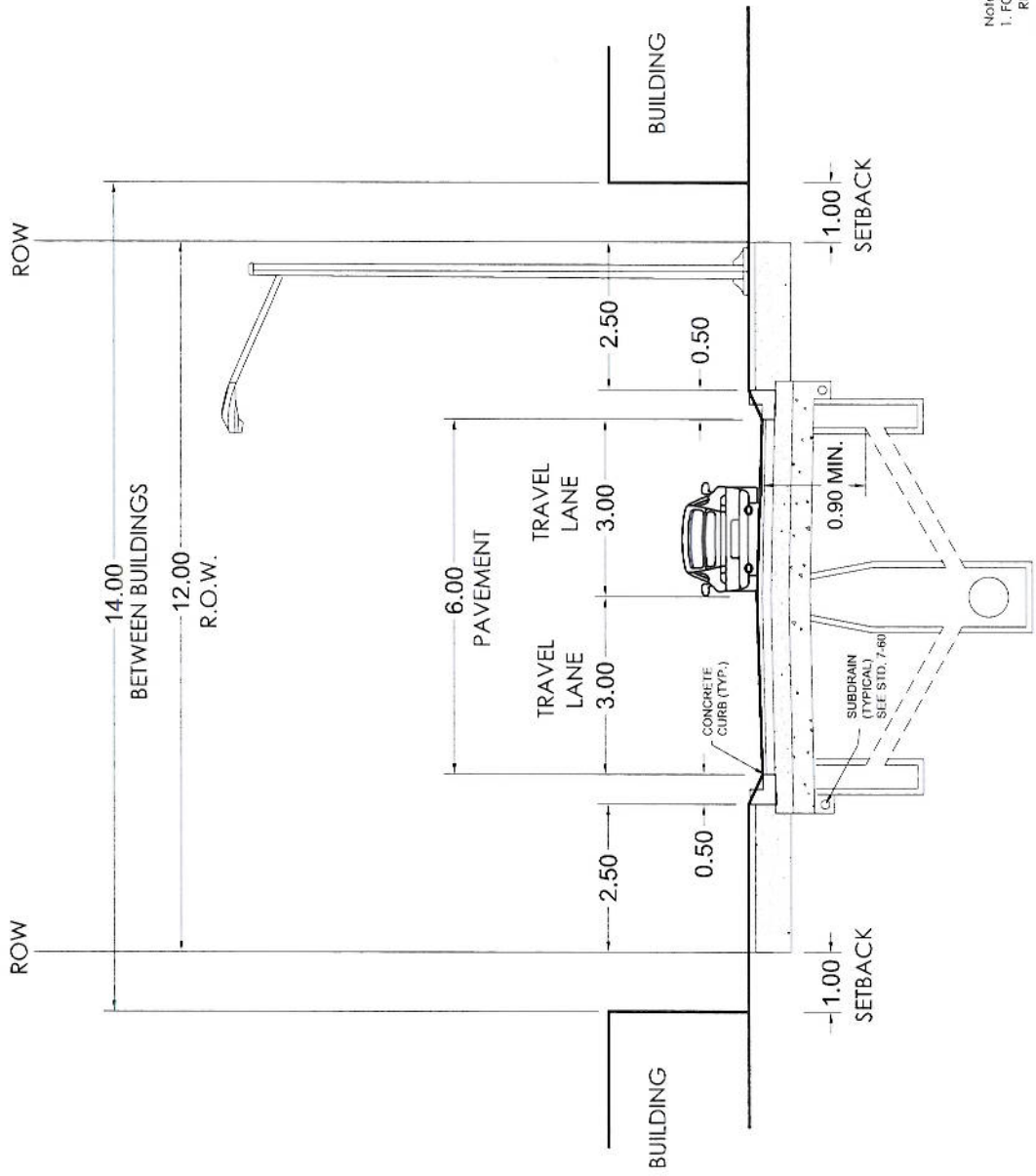


Note:
1. FOR GENERAL NOTES AND ASPHALT REQUIREMENTS REFER TO STD. 7.20

TOWN OF OAKVILLE

STANDARD STREET SECTION
RESIDENTIAL LANEWAY
7.5m RIGHT OF WAY

APPROVED	STD 7-21A
	REVISION DATE
DIRECTOR OF ENGINEERING AND CONSTRUCTION	AUGUST 2009



STORM SEWER
AT 1.5m MIN.

Note:
1. FOR GENERAL NOTES AND ASPHALT REQUIREMENTS
REFER TO STD. 7-20

TOWN OF OAKVILLE
STANDARD STREET SECTION
COMMERCIAL LANEWAY
12.0m RIGHT OF WAY

APPROVED  **STD 7-21B**

DIRECTOR OF ENGINEERING AND CONSTRUCTION

REVISION DATE August 2009

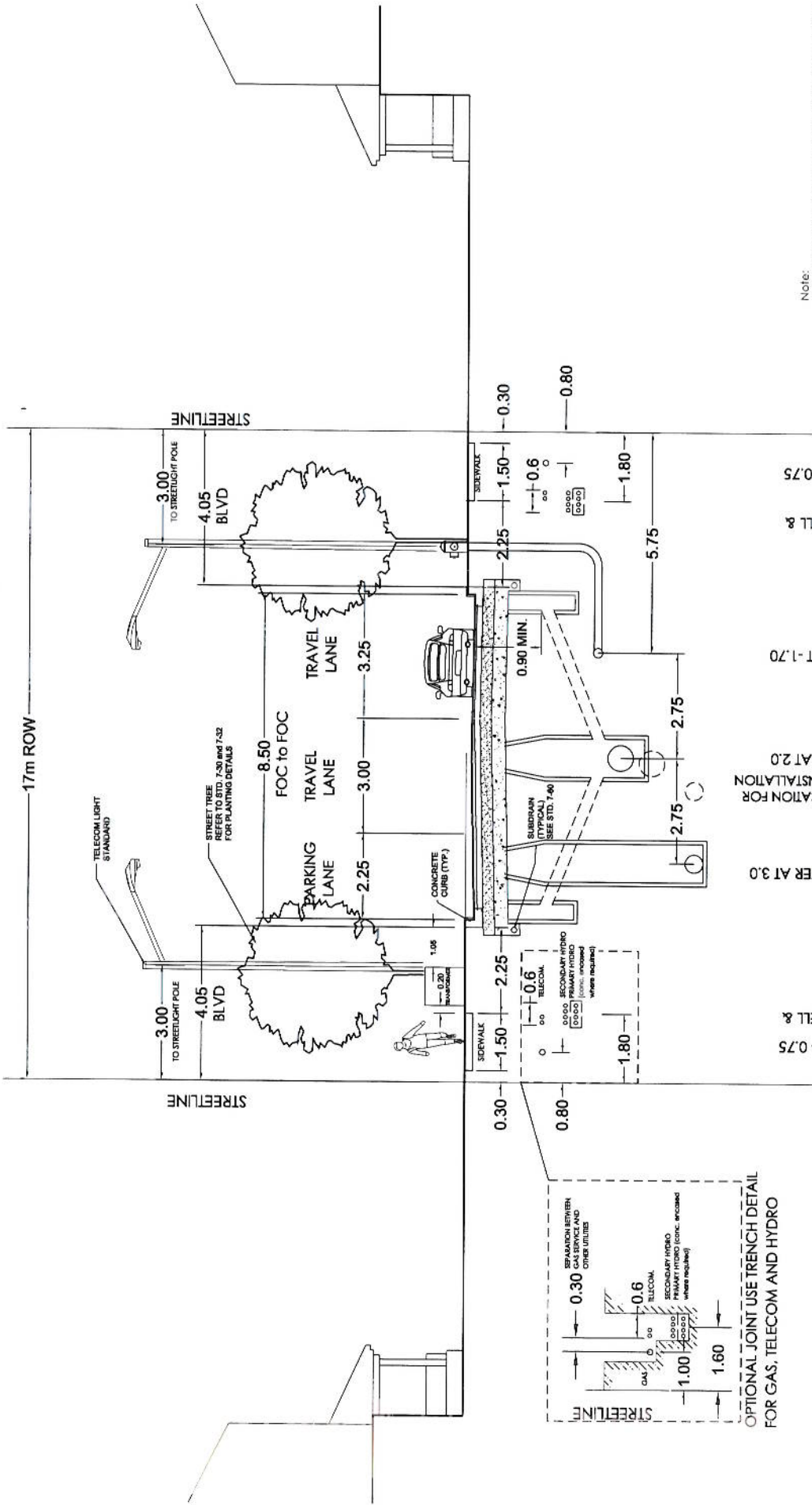
ROW

17m ROW

ROW

STREETLINE

STREETLINE

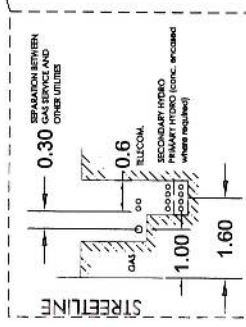


Note:
 1. FOR GENERAL NOTES AND ASPHALT REQUIREMENTS
 REFER TO STD. 7-20

TOWN OF OAKVILLE
STANDARD STREET SECTION
 LOCAL ROADWAY
 17.0m RIGHT OF WAY
 MODIFIED BOULEVARD SPACE

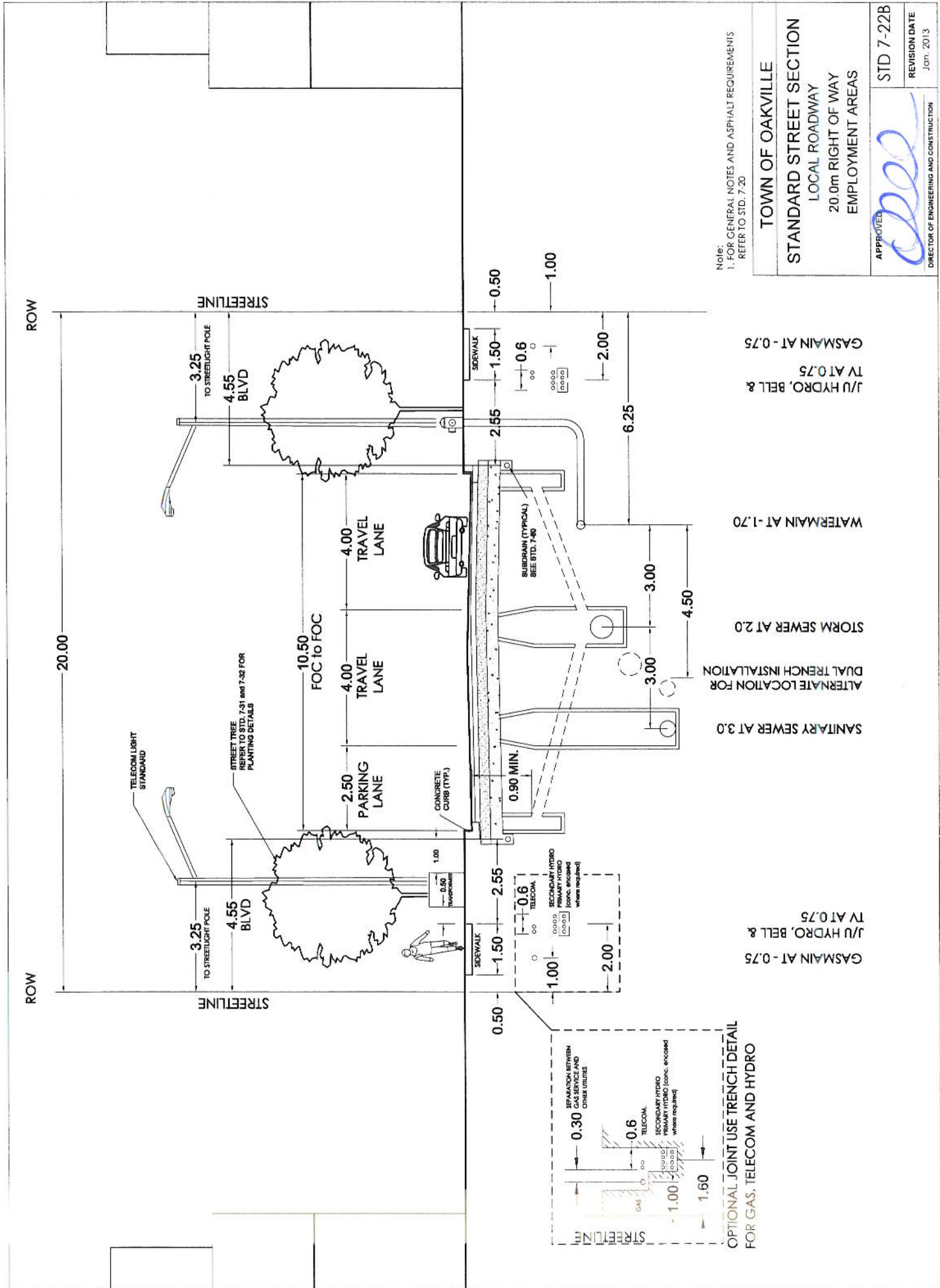
APPROVED

 DIRECTOR OF ENGINEERING AND CONSTRUCTION
 STD 7-22A
 REVISION DATE
 JULY 3, 2012



OPTIONAL JOINT USE TRENCH DETAIL
 FOR GAS, TELECOM AND HYDRO

GASMAIN AT -0.75
 J/U HYDRO, BELL &
 TV AT 0.75
 WATERMAIN AT -1.70
 STORM SEWER AT 2.0
 ALTERNATE LOCATION FOR
 DUAL TRENCH INSTALLATION
 SANITARY SEWER AT 3.0
 J/U HYDRO, BELL &
 TV AT 0.75
 GASMAIN AT -0.75

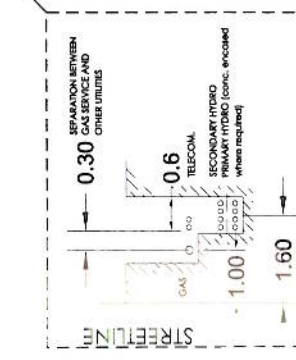


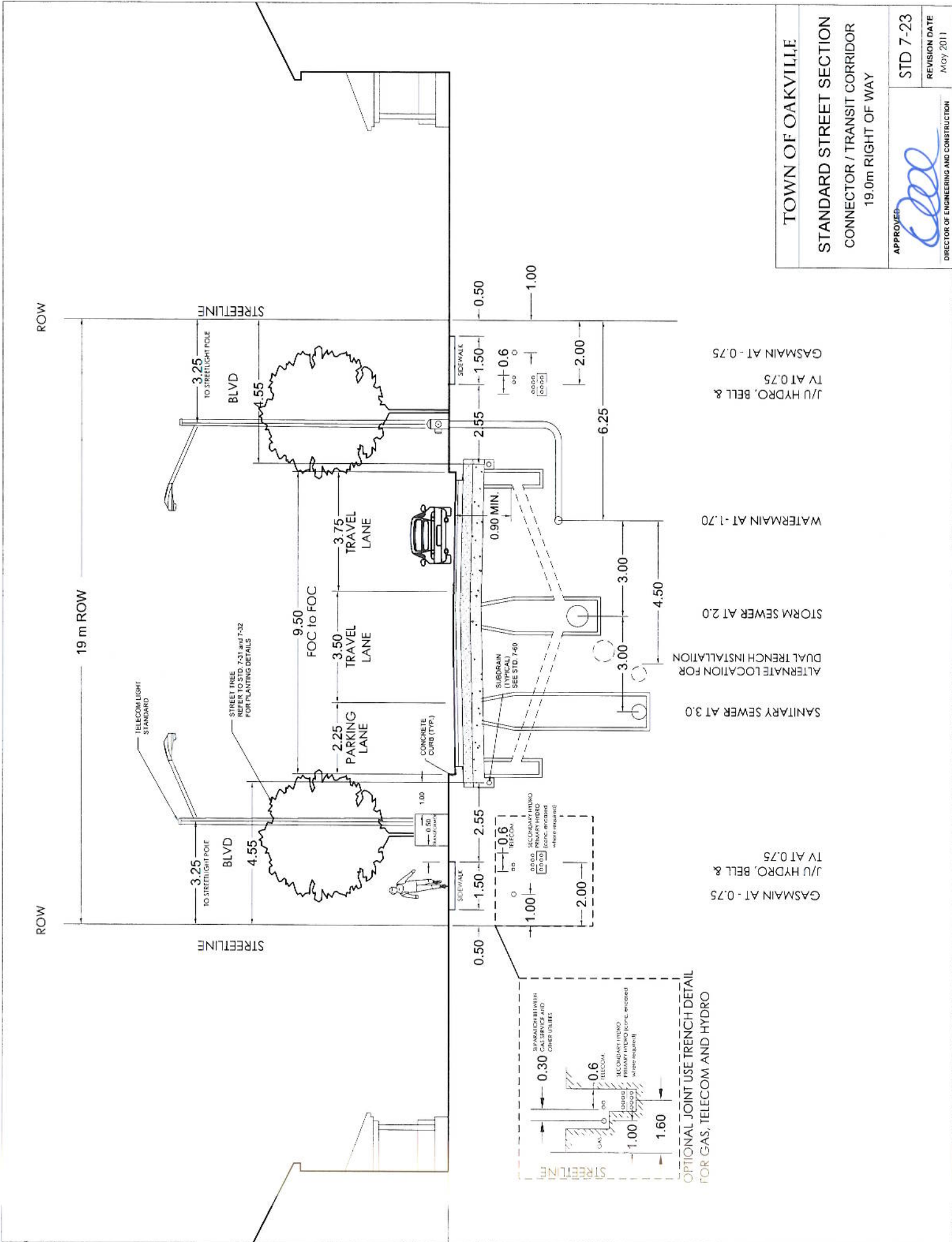
Note:
1. FOR GENERAL NOTES AND ASPHALT REQUIREMENTS REFER TO STD. 7.20

TOWN OF OAKVILLE
STANDARD STREET SECTION
LOCAL ROADWAY
20.0m RIGHT OF WAY
EMPLOYMENT AREAS


APPROVED: [Signature]
DIRECTOR OF ENGINEERING AND CONSTRUCTION
REVISION DATE: Jan. 2013
STD 7-22B

J/U HYDRO, BELL & TV AT 0.75
GASMAIN AT -0.75
WATERMAIN AT -1.70
STORM SEWER AT 2.0
ALTERNATE LOCATION FOR DUAL TRENCH INSTALLATION
SANITARY SEWER AT 3.0





TOWN OF OAKVILLE
 STANDARD STREET SECTION
 CONNECTOR / TRANSIT CORRIDOR
 19.0m RIGHT OF WAY

APPROVED: 
 DIRECTOR OF ENGINEERING AND CONSTRUCTION

STD 7-23
 REVISION DATE
 May 2011

GASMAIN AT -0.75
 J/U HYDRO, BELL &
 TV AT 0.75

WATERMAIN AT -1.70

STORM SEWER AT 2.0

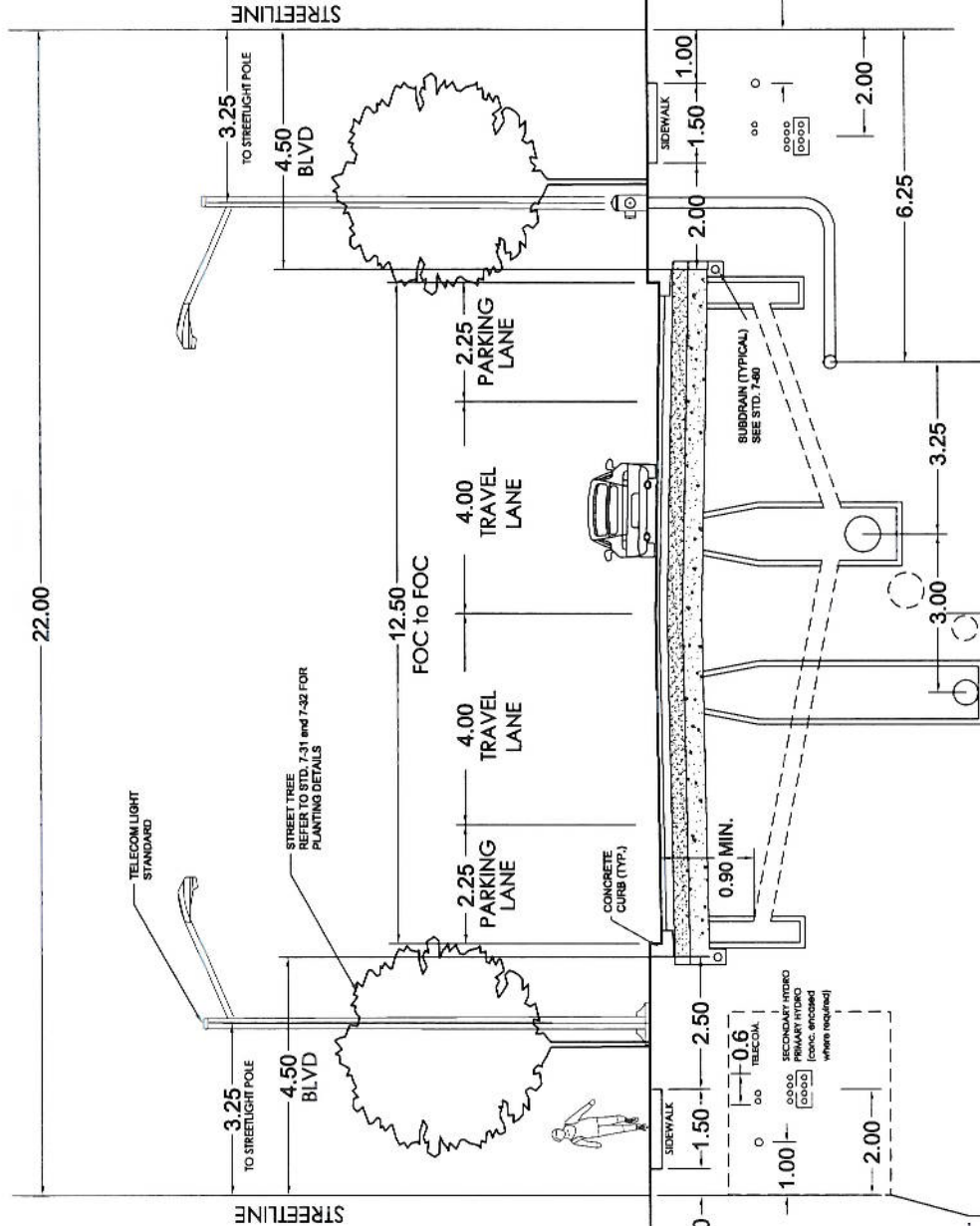
DUAL TRENCH INSTALLATION FOR
 SANITARY SEWER AT 3.0

J/U HYDRO, BELL &
 TV AT 0.75

ROW

ROW

22.00



STREETLINE
 TO STREETLIGHT POLE
 BLVD
 TELECOMM LIGHT STANDARD
 STREET TREE, 7.31 and 7.32 FOR PLANTING DETAILS
 FOC to FOC
 TRAVEL LANE
 PARKING LANE
 CONCRETE CURB (TYP.)
 SIDEWALK
 SUBDRAIN (TYPICAL) SEE STD. 7-80
 GASMAIN AT -0.75
 TV AT 0.75
 WATERMAIN AT -1.70
 STORM SEWER AT 2.0
 ALTERNATE LOCATION FOR DUAL TRENCH INSTALLATION
 SANITARY SEWER AT 3.0



GASMAIN AT -0.75
 TV AT 0.75
 WATERMAIN AT -1.70
 STORM SEWER AT 2.0
 SANITARY SEWER AT 3.0

Note:
 1. FOR GENERAL NOTES AND ASPHALT REQUIREMENTS REFER TO STD. 7-20

TOWN OF OAKVILLE
STANDARD STREET SECTION
 AVENUE/TRANSIT CORRIDOR
 22.0m RIGHT OF WAY
 GENERAL URBAN & SUB-URBAN,
 NEIGHBOURHOOD CENTRE AND
 EMPLOYMENT AREAS

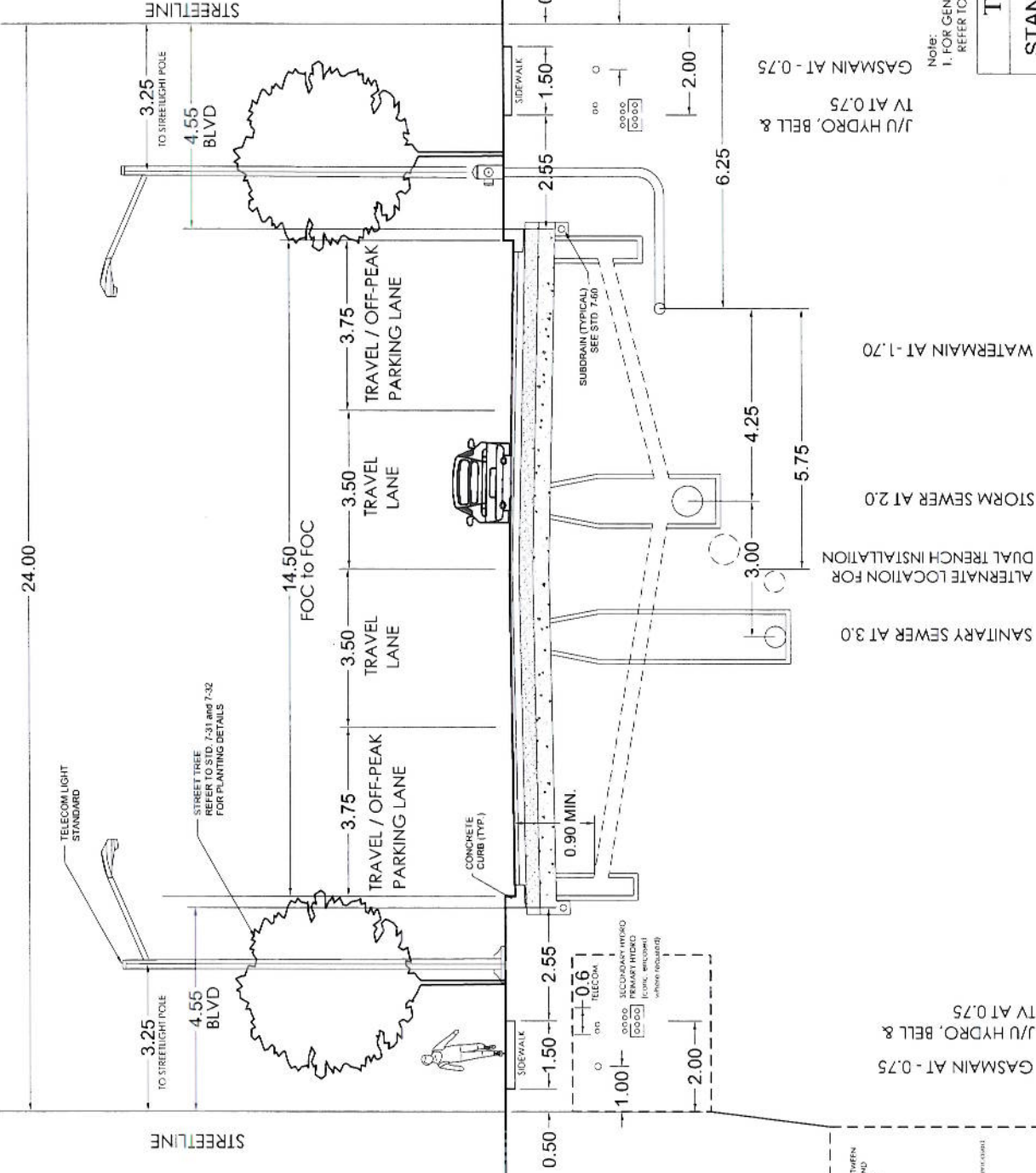
APPROVED

 DIRECTOR OF ENGINEERING AND CONSTRUCTION
 STD 7-24
 REVISION DATE
 NOVEMBER, 2011

ROW

ROW

24.00



Note:
 1. FOR GENERAL NOTES AND ASPHALT REQUIREMENTS REFER TO STD. 7-20

TOWN OF OAKVILLE
STANDARD STREET SECTION
 AVENUE/TRANSIT CORRIDOR
 24.0m RIGHT OF WAY
 URBAN CORE AREA

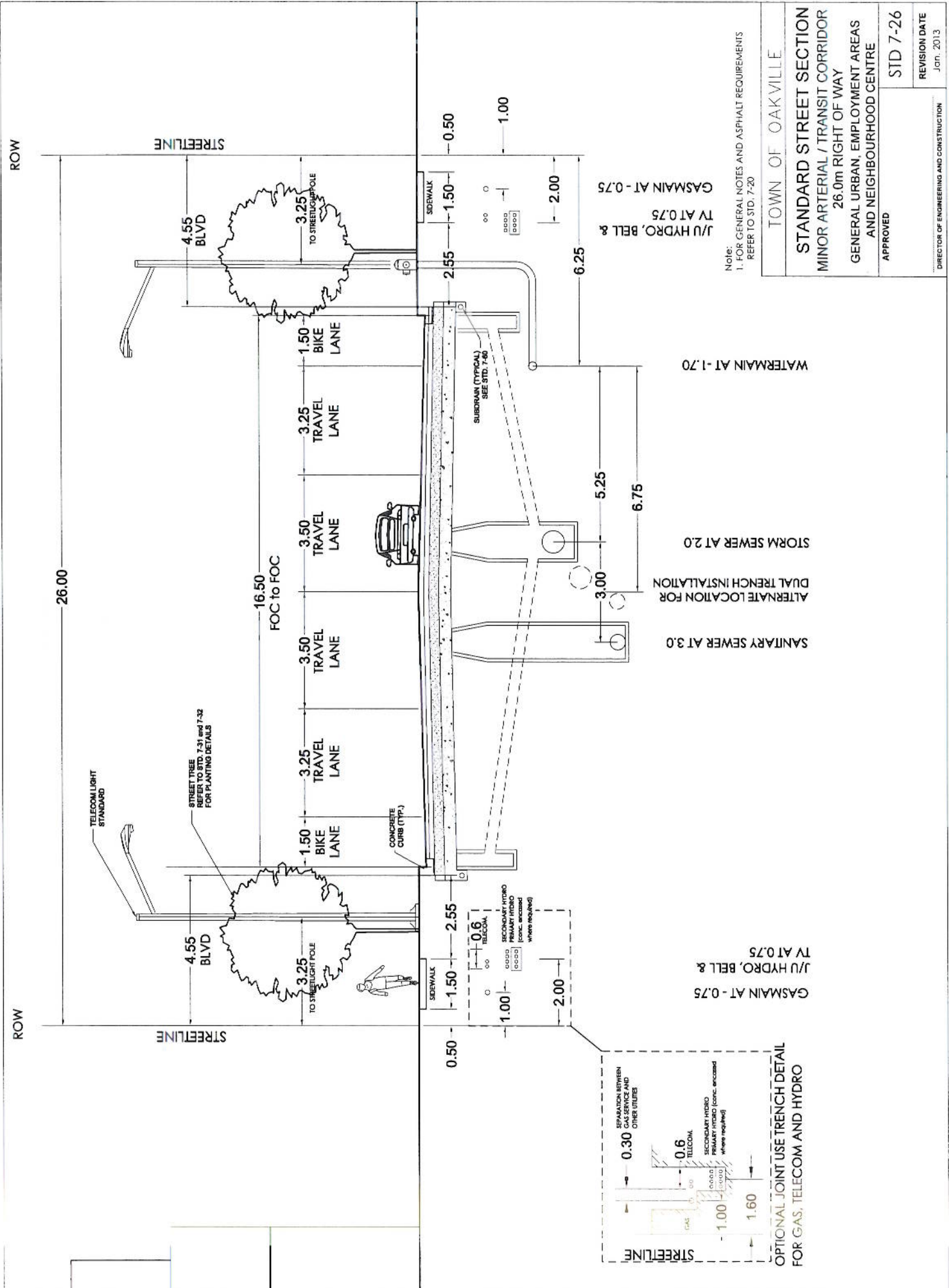
APPROVED

 DIRECTOR OF ENGINEERING AND CONSTRUCTION

STD 7-25
 REVISION DATE
 May, 2011



OPTIONAL JOINT USE TRENCH DETAIL
 FOR GAS, TELECOM AND HYDRO



ROW

26.00

STREETLINE

4.55
BLVD

3.25
TO STREET POLE

3.25
TRAVEL LANE

3.50
TRAVEL LANE

3.50
TRAVEL LANE

3.25
TRAVEL LANE

1.50
BIKE LANE

FOC to FOC

16.50

STREET TREE
PLANTING
3.31 and 7.32
FOR PLANTING DETAILS

TELECOM LIGHT
STANDARD

4.55
BLVD

3.25
TO STREET POLE

STREETLINE

CONCRETE
CURB (TYP.)

0.50

1.50

2.55

0.6
TELECOM

SECONDARY HYDRO
PRIMARY HYDRO
(conc. encased
where required)

1.00

2.00

1.50

1.50

0.50

STREETLINE

SEPARATION BETWEEN
GAS SERVICE AND
OTHER UTILITIES

0.30

1.00

1.60

0.6
TELECOM

SECONDARY HYDRO
PRIMARY HYDRO (conc. encased
where required)

OPTIONAL JOINT USE TRENCH DETAIL
FOR GAS, TELECOM AND HYDRO

WATERMAIN AT -1.70

STORM SEWER AT 2.0

ALTERNATE LOCATION FOR
DUAL TRENCH INSTALLATION

SANITARY SEWER AT 3.0

J/U HYDRO, BELL &
GASMAIN AT -0.75

2.00

5.25

3.00

6.75

6.25

2.00

1.60

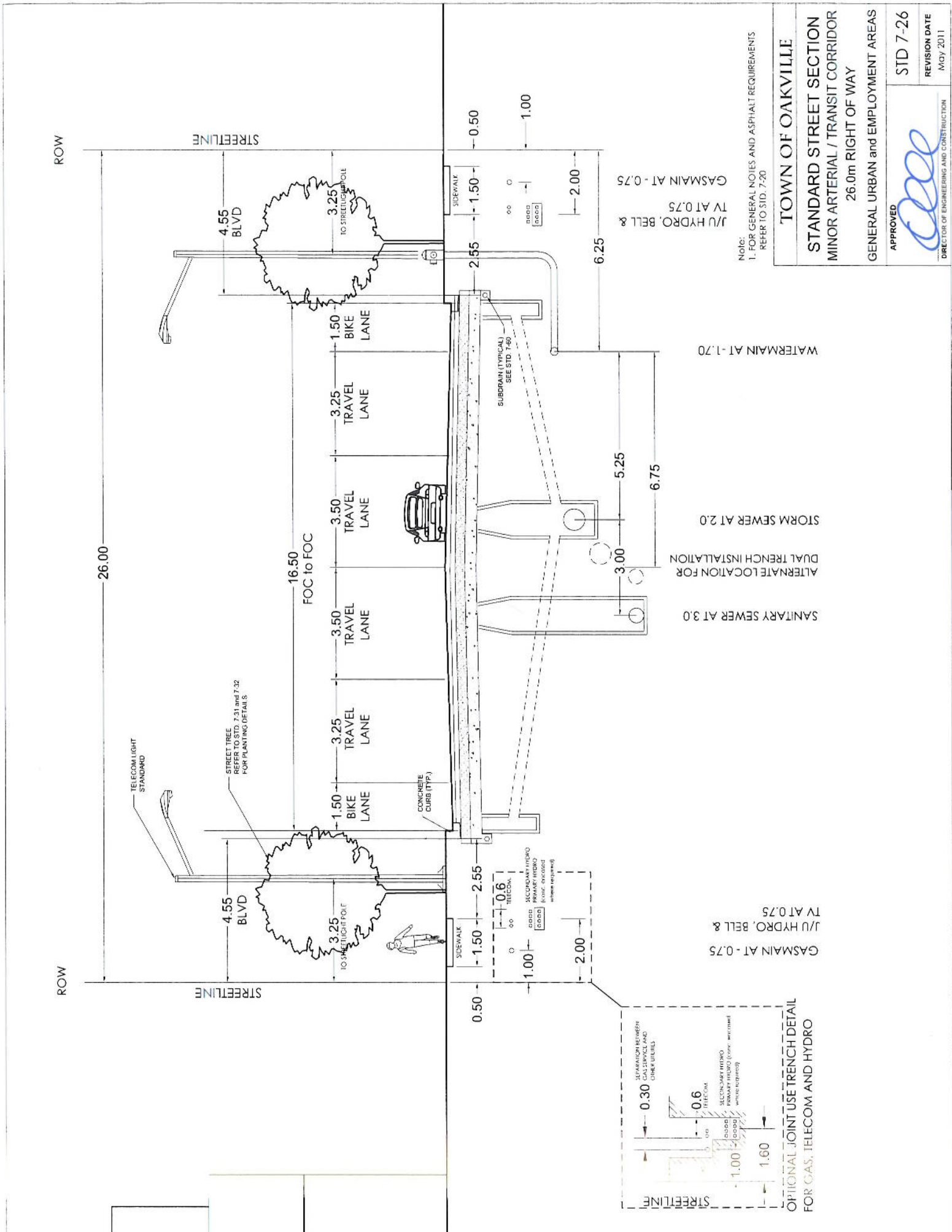
Note:
1. FOR GENERAL NOTES AND ASPHALT REQUIREMENTS
REFER TO STD. 7-20

TOWN OF OAKVILLE

STANDARD STREET SECTION
MINOR ARTERIAL / TRANSIT CORRIDOR
26.0m RIGHT OF WAY
GENERAL URBAN, EMPLOYMENT AREAS
AND NEIGHBOURHOOD CENTRE


APPROVED
STD 7-26

DIRECTOR OF ENGINEERING AND CONSTRUCTION
REVISION DATE
Jan. 2013



Note:
1. FOR GENERAL NOTES AND ASPHALT REQUIREMENTS REFER TO STD. 7-20

TOWN OF OAKVILLE
STANDARD STREET SECTION
 MINOR ARTERIAL / TRANSIT CORRIDOR
 26.0m RIGHT OF WAY
 GENERAL URBAN and EMPLOYMENT AREAS

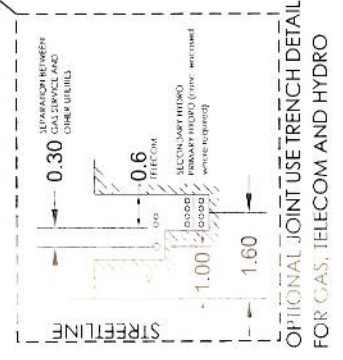
APPROVED 
 DIRECTOR OF ENGINEERING AND CONSTRUCTION

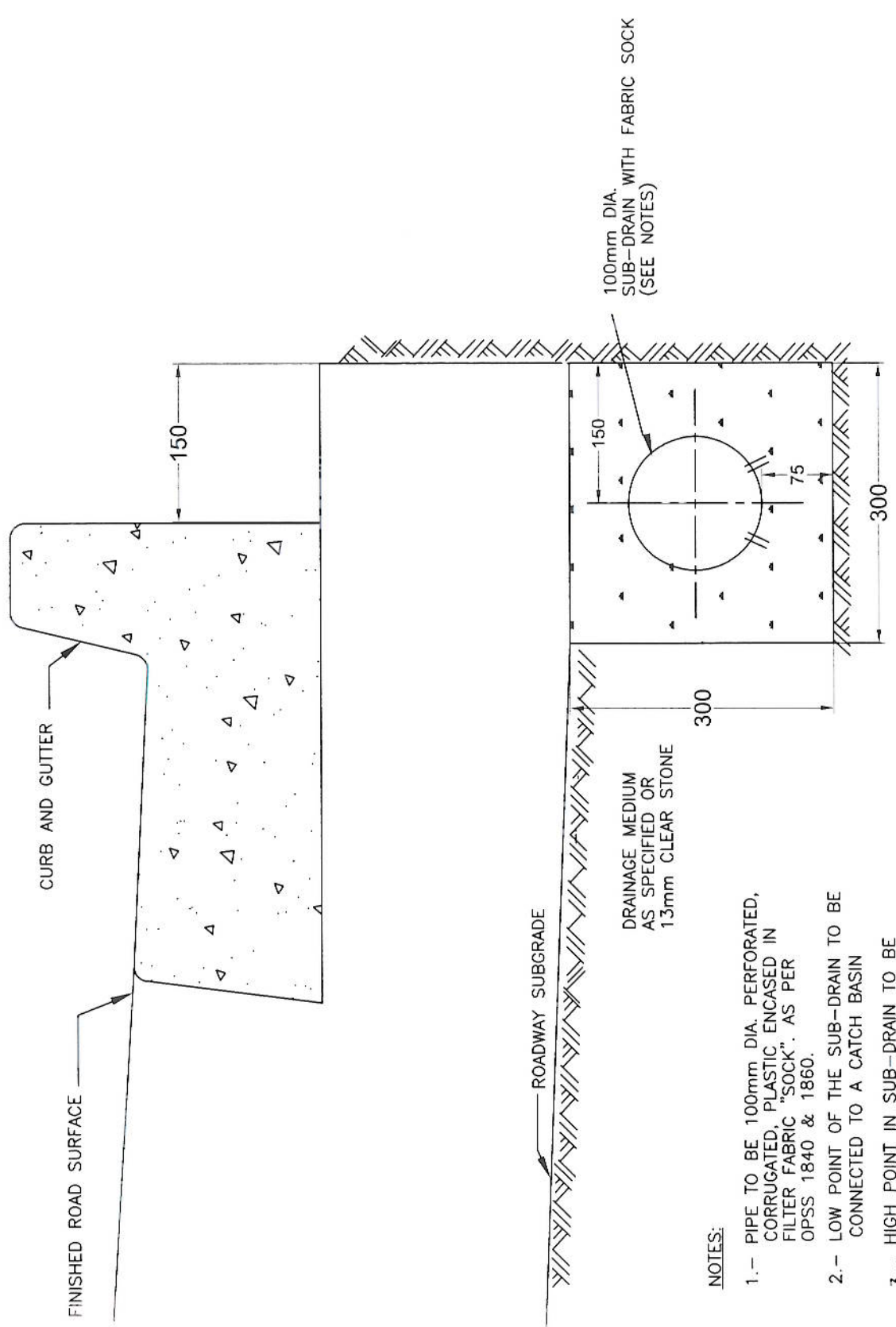
STD 7-26
 REVISION DATE
 MCOY 2011

J/U HYDRO, BELL & TV AT 0.75
 GASMAIN AT -0.75

WATERMAIN AT -1.70
 STORM SEWER AT 2.0
 ALTERNATE LOCATION FOR DUAL TRENCH INSTALLATION
 SANITARY SEWER AT 3.0

J/U HYDRO, BELL & TV AT 0.75
 GASMAIN AT -0.75





NOTES:

- 1.- PIPE TO BE 100mm DIA. PERFORATED, CORRUGATED, PLASTIC ENCASED IN FILTER FABRIC "SOCK". AS PER OPSS 1840 & 1860.
- 2.- LOW POINT OF THE SUB-DRAIN TO BE CONNECTED TO A CATCH BASIN
- 3.- HIGH POINT IN SUB-DRAIN TO BE SEALED WITH FACTORY FABRICATED PLUG.
- 4.- SUB-DRAIN TRENCH SHALL BE EXCAVATED BY A MECHANICAL HOE WITH A BUCKET NOT EXCEEDING 400MM

DIMENSIONS IN mm EXCEPT AS NOTED

TOWN OF OAKVILLE	
SUB-DRAIN	
APPROVED	 DIRECTOR OF PLANNING AND CONSTRUCTION
STD 7-60	REVISION DATE AUGUST 2009

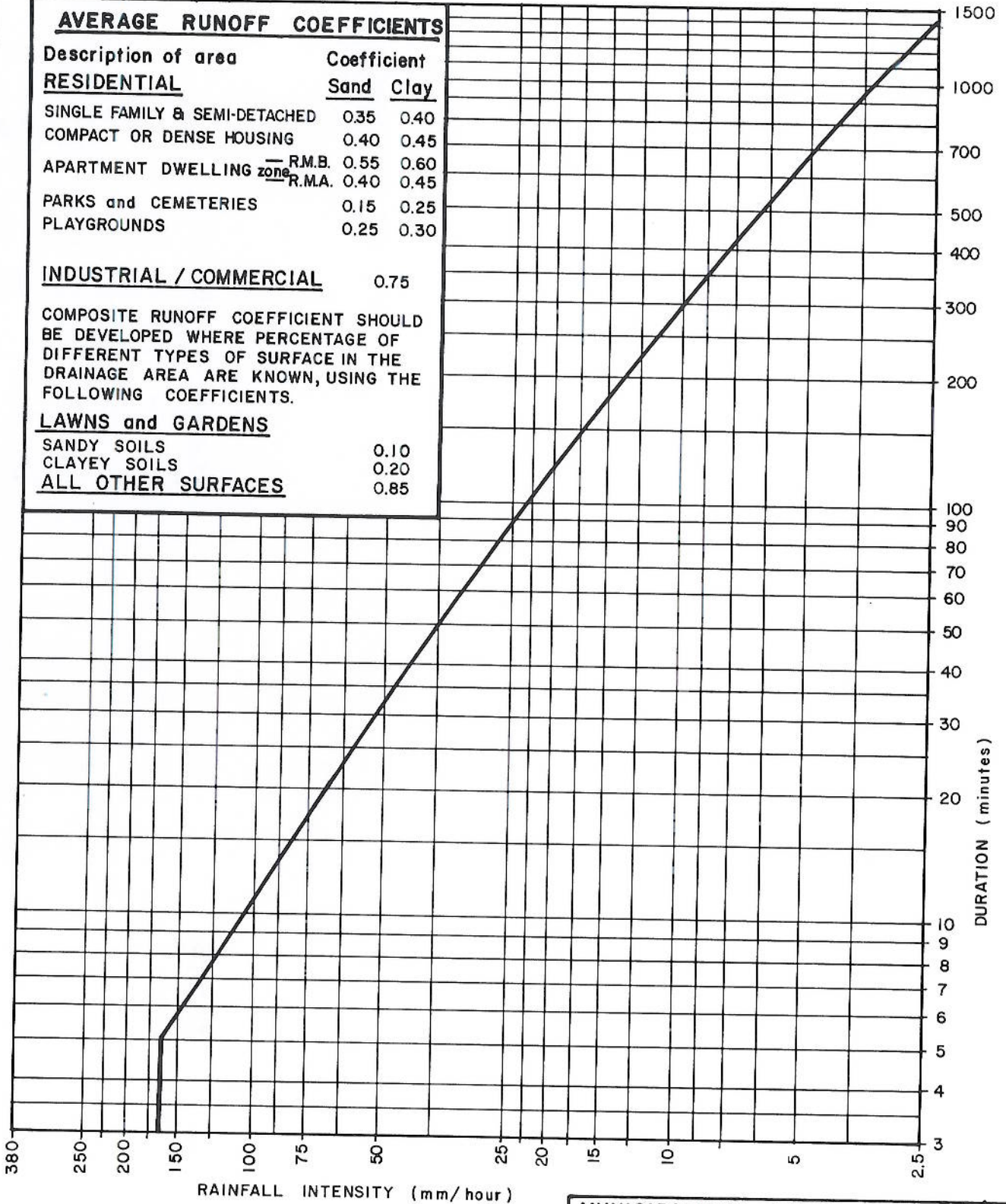
AVERAGE RUNOFF COEFFICIENTS

Description of area	Coefficient	
	Sand	Clay
RESIDENTIAL		
SINGLE FAMILY & SEMI-DETACHED	0.35	0.40
COMPACT OR DENSE HOUSING	0.40	0.45
APARTMENT DWELLING zone	R.M.B.	0.55
	R.M.A.	0.40
PARKS and CEMETERIES	0.15	0.25
PLAYGROUNDS	0.25	0.30

INDUSTRIAL / COMMERCIAL 0.75

COMPOSITE RUNOFF COEFFICIENT SHOULD BE DEVELOPED WHERE PERCENTAGE OF DIFFERENT TYPES OF SURFACE IN THE DRAINAGE AREA ARE KNOWN, USING THE FOLLOWING COEFFICIENTS.

LAWNS and GARDENS	
SANDY SOILS	0.10
CLAYEY SOILS	0.20
ALL OTHER SURFACES	0.85



MUNICIPALITY: TOWN OF OAKVILLE

RAINFALL CURVE
(5 YEAR FREQUENCY)

APPROVED

DIRECTOR OF PUBLIC WORKS

STD.8-1

REVISION DATE
07201995

CLASS OF PIPE			MAXIMUM HEIGHT OF FILL					
			—	A257 CL 3	A257 50D	A257 65D	A257 100D	A257 140D
CSA			—	A257 CL 3	A257 50D	A257 65D	A257 100D	A257 140D
ASTM			—	C-14 E. S.	C-76 II	C-76 III	C-76 IV	C-76 V
PIPE DIA (mm)	TRENCH WIDTH	EMBKT. COND.**						
300	1.17	0.53	-	3.5	-	-	4.71	8.21
375	1.24	0.52	-	3.5	-	-	4.86	11.40
450	1.35	0.36	-	-	-	3.34	5.17	12.16
525	1.43	0.35	-	-	2.43	3.34	5.78	19.67
600	1.52	0.32	-	-	2.43	3.50	6.32	26.87
675	1.61	0.26	-	-	2.58	3.65	6.54	32.53
750	1.70	0.24	-	-	2.58	3.80	6.99	32.22
825	1.79	0.20	-	-	2.58	3.59	7.30	28.42
900	1.88	0.18	-	-	2.74	4.10	7.60	25.47
975	1.97	0.19	-	-	2.92	4.26	7.75	24.53
1050	2.06	0.20	-	-	2.89	4.41	7.90	23.56
1200	2.9	0.21	-	-	3.04	4.44	7.75	18.45
1350	2.56	0.24	-	-	3.01	4.29	7.30	15.08
1500	2.84	0.26	-	-	2.95	4.19	6.99	13.53
1650	2.92	0.32	-	-	2.95	4.10	6.69	12.43
1800	3.40	0.35	-	-	2.89	4.10	6.63	11.70
1950	3.58	0.35	-	-	2.95	4.10	6.69	12.01
2100	3.76	0.32	-	-	3.04	4.26	6.84	12.01
2250	3.94	0.29	-	-	3.19	4.32	6.99	12.16
2400	4.11	0.32	-	-	3.19	4.41	6.99	12.31
2550	4.29	0.33	-	-	3.19	4.41	7.14	12.46
2700	4.47	0.32	-	-	3.34	4.41	7.14	12.46
2850	4.65	0.33	-	-	3.34	4.56	7.30	12.46
3000	4.83	0.32	-	-	3.34	4.56	7.30	12.58
3200	5.00	0.35	-	-	3.34	4.56	7.30	12.55
3300	5.18	0.35	-	-	3.34	4.71	7.45	12.62
3500	5.36	0.35	-	-	3.50	4.71	7.45	12.64
3600	5.54	0.36	-	-	3.50	4.71	7.45	12.64

LEGEND :

E.S. - EXTRA STRENGTH

NOTES :

1. THE LOAD FACTOR USED FOR CLASS 'B' BEDDING IS 1.9
2. THE TABLE IS BASED ON A BACKFILL WEIGHT OF 1920 kg/m³ & A.K.u' VALUE OF 0.130
3. THE HEIGHT OF FILL IS MEASURED FROM THE TOP OF THE PIPE
4. THE TRENCH WIDTH IS BASED ON O.P.S.D. 802.03 AND IS THE WIDTH OF THE TRENCH MEASURED AT THE TOP OF PIPE
5. MINIMUM HEIGHT OF COVER ALLOWABLE FOR THE TABLE IS 600 mm. IF THE COVER IS LESS THAN 600 mm, THE SEWER MUST BE DESIGNED FROM FIRST PRINCIPLES.
- *6. FOR PIPES GREATER THAN 1200 mm DIA. THE TABLE SHALL BE USED AS A GUIDE ONLY AND THE DESIGN SHALL BE ANALYSED INDIVIDUALLY.

** FOR THE RANGE OF DEPTH INDICATED, THE PIPE IS IN AN EMBANKMENT CONDITION OF LOADING RATHER THAN IN A TRENCH CONDITION OF LOADING. IN THIS CONDITION, THE LOAD IS A MAXIMUM AND AN INCREASE IN TRENCH WIDTH WOULD NOT INCREASE THE LOAD ON THE PIPE.

MUNICIPALITY : TOWN OF OAKVILLE

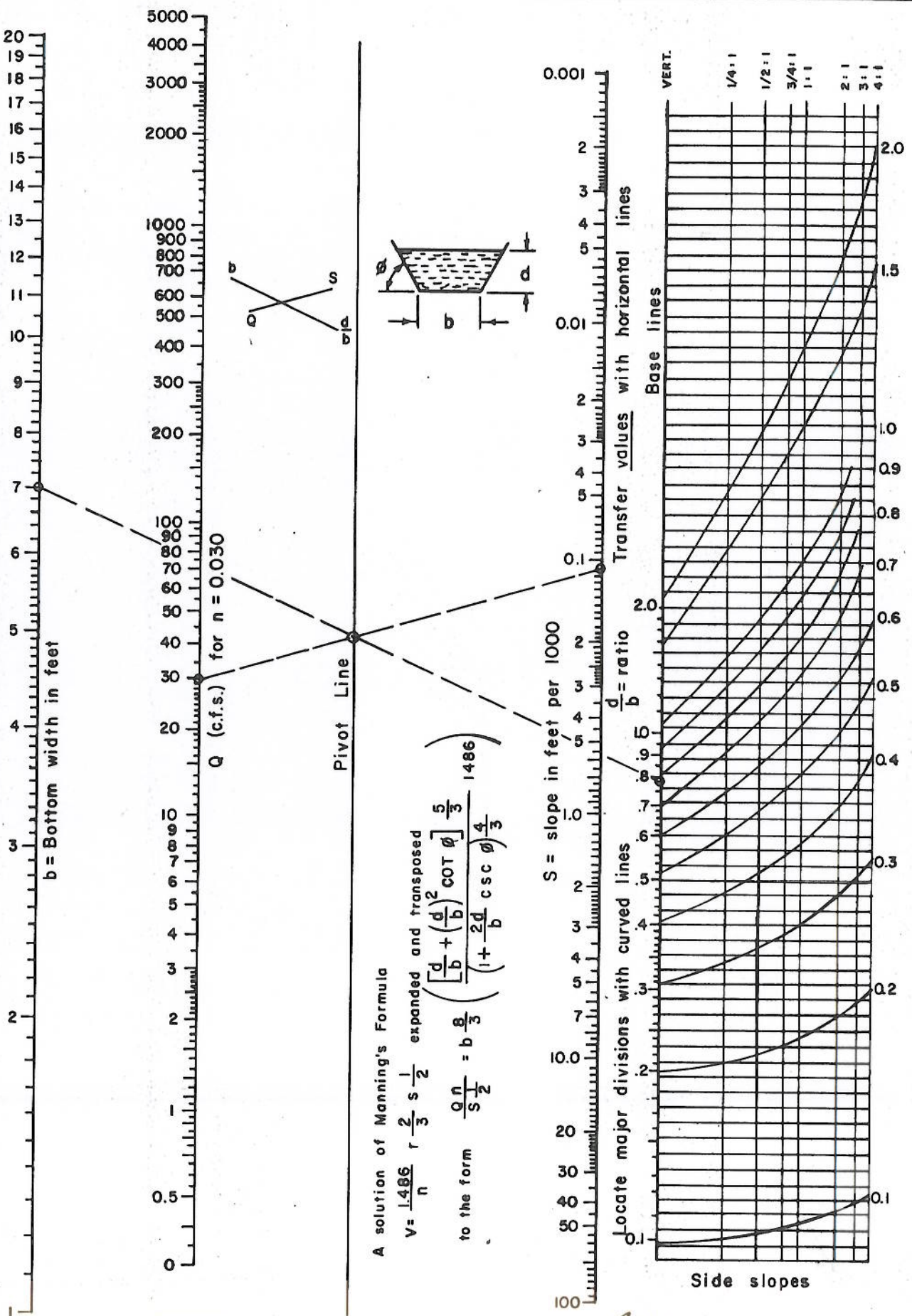
**FILL HEIGHT TABLE
CONCRETE PIPE
CLASS 'B₁' & 'B₃' BEDDING**

APPROVED


DIRECTOR OF PUBLIC WORKS

STD 8-2

REVISION DATE
07201995



A solution of Manning's Formula

$$V = \frac{1.486}{n} r^{\frac{2}{3}} s^{\frac{1}{2}}$$

expanded and transposed

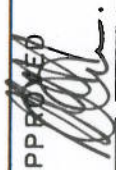
$$\left[\frac{d}{b} + \left(\frac{d}{b} \right)^2 \cot \theta \right]^{\frac{5}{3}} = \frac{1486}{n} \frac{r^{\frac{2}{3}} s^{\frac{1}{2}}}{\left(1 + \frac{2d}{b} \csc \theta \right)^{\frac{4}{3}}}$$

to the form

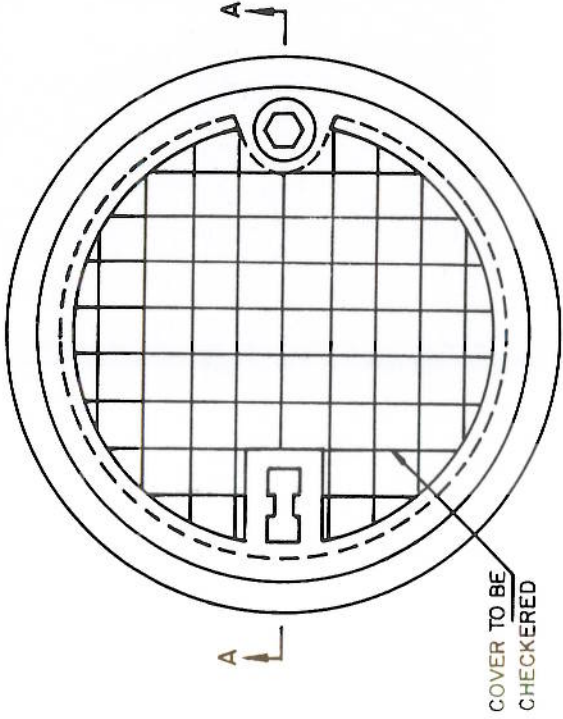
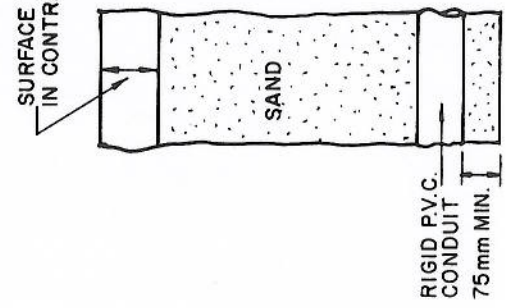
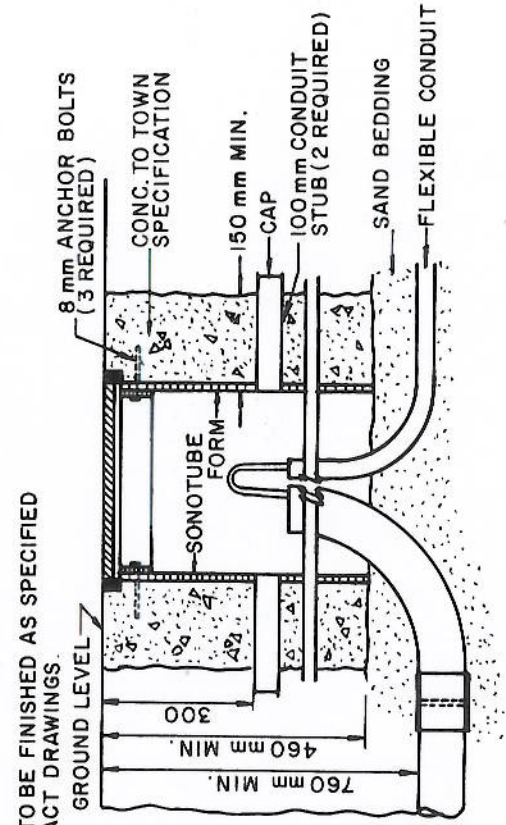
$$\frac{Q n}{S^{\frac{1}{2}}} = b \frac{8}{3}$$

ROAD GEOMETRICS	MINOR LOCAL ROAD AND CUL-DE-SAC	LOCAL ROAD		COLLECTOR ROAD	ARTERIAL ROAD
		RESIDENTIAL	INDUSTRIAL		
DESIGN SPEED (km/h)	50	50		60	60 - 80
TRAFFIC VOLUMES (AADT) - MAX.	400	1000		3000	> 3000
MIN. RIGHT-OF-WAY (m)	18	20		26	35
MIN. PAVEMENT WIDTH BETWEEN FACE OF CURBS (m)	7.5	8.5	9.0	8.5 - 14.5	14.5 - 23
MIN. CENTRE LINE RADIUS (m)	13.6	90		130 (Super-elevated) 210 (Non)	130 - 250
MIN. STOPPING SIGHT DISTANCE (m)	65	65		85	85 - 140
PERCENT GRADE MAXIMUM MINIMUM	7% 0.5%	7% 0.5%		7% 0.5%	6% 0.5%
SUPERELEVATION	NOT REQ'D	NOT REQ'D		NOT REQ'D	6% MAX.
MIN. TANGENT BETWEEN CURVES (m)	45	45		45	75
MIN. TANGENT AT INTERSECTIONS (m)	30	30		30	60
MAX. GRADE CHANGE	1.5%	1.5%		1.5%	1.5%
INTERSECTION RADIUS WITH :					
LOCAL ROAD (m)	7.5 (NOT REQ'D)*	7.5 (NOT REQ'D)*			
COLLECTOR ROAD (m)	10 (7.5)*	10 (7.5)*		10.5 (15.0)*	
ARTERIAL ROAD (m)	10.5 (15.0)*	10.5 (15.0)*		10.5 (15.0)*	15.0 (15.0)*

* BRACKETED FIGURE INDICATES SIZE OF DAYLIGHT TRIANGLE AT INTERSECTING STREETS.

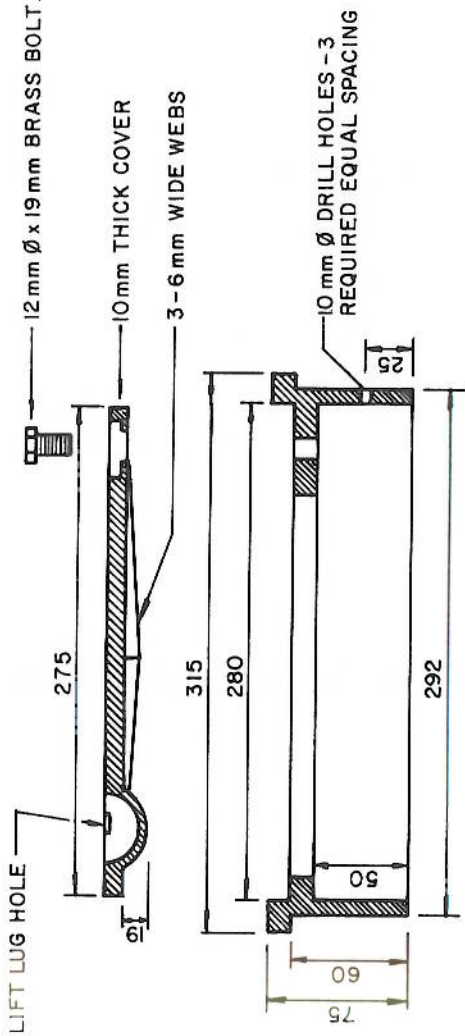
MUNICIPALITY : TOWN OF OAKVILLE	
ROAD GEOMETRIC DESIGN STANDARDS	
APPROVED 	STD 8-4
DIRECTOR OF PUBLIC WORKS	REVISION DATE 07201995

DIMENSIONS IN m EXCEPT AS NOTED




INSTALLATION DIAGRAM

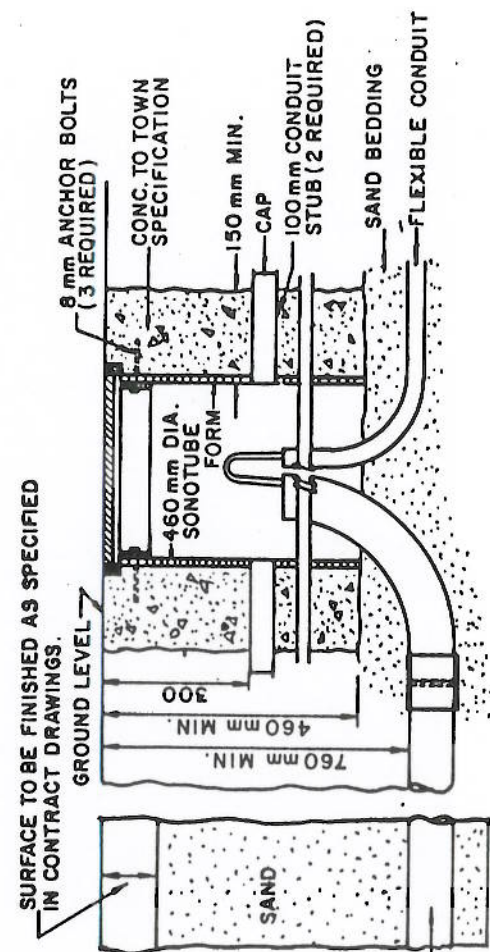
- NOTES:
1. RIGID CONDUIT TO BE BEDDED AND BACKFILLED WITH SAND.
 2. WHERE RIGID CONDUIT TERMINATES WITHOUT INSPECTION CHAMBER, CONDUIT MUST BE CAPPED.
 3. TWO 100 mm DIA. RIGID P.V.C. CONDUIT STUBS TO BE PROVIDED IN WALLS OF INSPECTION CHAMBER.



SECTION A - A
CAST IRON FRAME & COVER

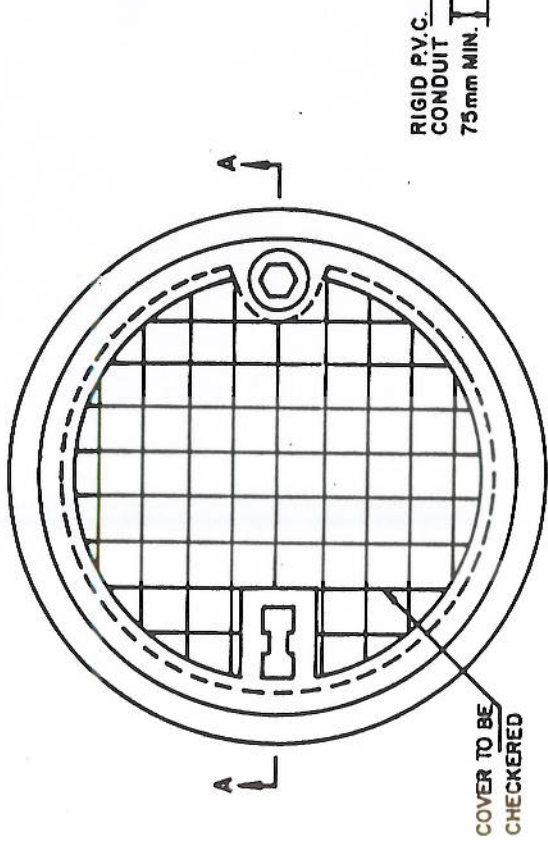
DIMENSIONS IN mm EXCEPT AS NOTED

MUNICIPALITY : TOWN OF OAKVILLE	
300 mm Ø ELECTRICAL INSPECTION CHAMBER	
APPROVED: 	STD 9-1
DIRECTOR OF PUBLIC WORKS	REVISION DATE 07201995

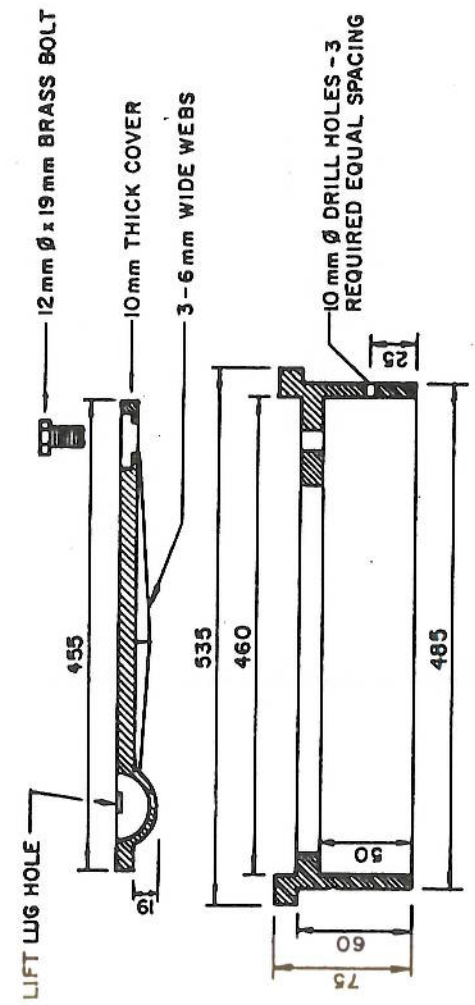


INSTALLATION DIAGRAM

- NOTES:
1. RIGID CONDUIT TO BE BEDDED AND BACKFILLED WITH SAND.
 2. WHERE RIGID CONDUIT TERMINATES WITHOUT INSPECTION CHAMBER, CONDUIT MUST BE CAPPED.
 3. TWO 100 mm DIA. RIGID P.V.C. CONDUIT STUBS TO BE PROVIDED IN WALLS OF INSPECTION CHAMBER.




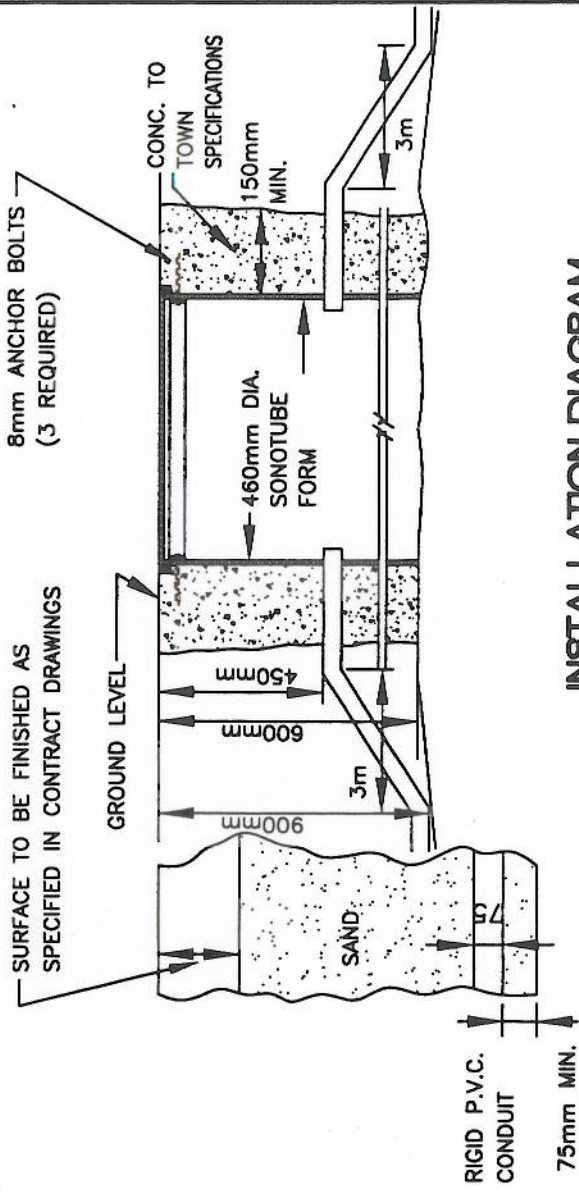
PLAN



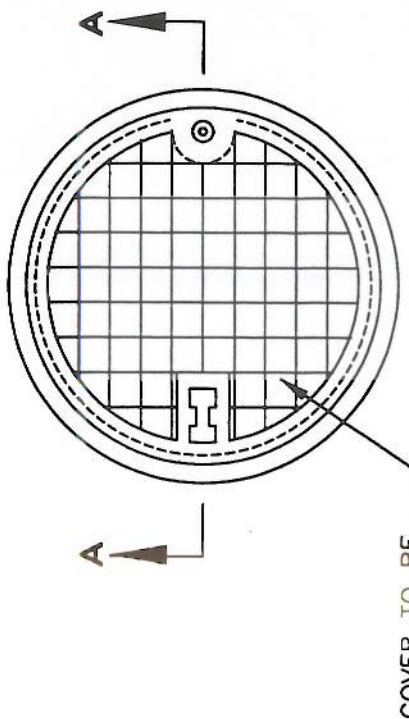
SECTION A - A
CAST IRON FRAME & COVER

DIMENSIONS IN mm EXCEPT AS NOTED

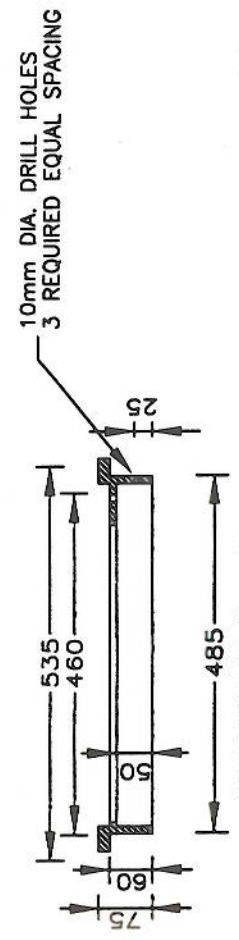
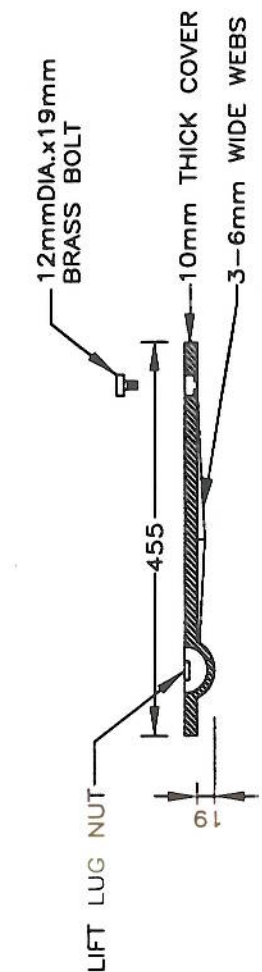
MUNICIPALITY : TOWN OF OAKVILLE	
460 mm Ø ELECTRICAL INSPECTION CHAMBER	
APPROVED: 	STD 9-2
DIRECTOR OF PUBLIC WORKS	REVISION DATE 07201995



INSTALLATION DIAGRAM



PLAN



**SECTION A - A
CAST IRON FRAME + COVER**

NOTES:

- 1.--RIGID CONDUIT TO BE BEDDED AND BACKFILLED WITH SAND.
- 2.--WHERE RIGID CONDUIT TERMINATES WITHOUT INSPECTION CHAMBER, CONDUIT MUST BE CAPPED.
- 3.--RIGID CONDUIT 75mm TO RISE FROM 900mm DEPTH TO 450mm OVER 3m ALIGNMENT TO ALLOW CABLE TO PASS THROUGH HANDWELL.

MUNICIPALITY: TOWN OF OAKVILLE

460mm ELECTRICAL INSPECTION CHAMBER TRAFFIC SIGNAL INTERCONNECT

APPROVED: *[Signature]*

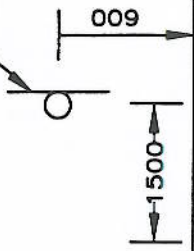
STANDARD: **STD. 9 - 2A**

REVISION DATE: **03-13-1996**

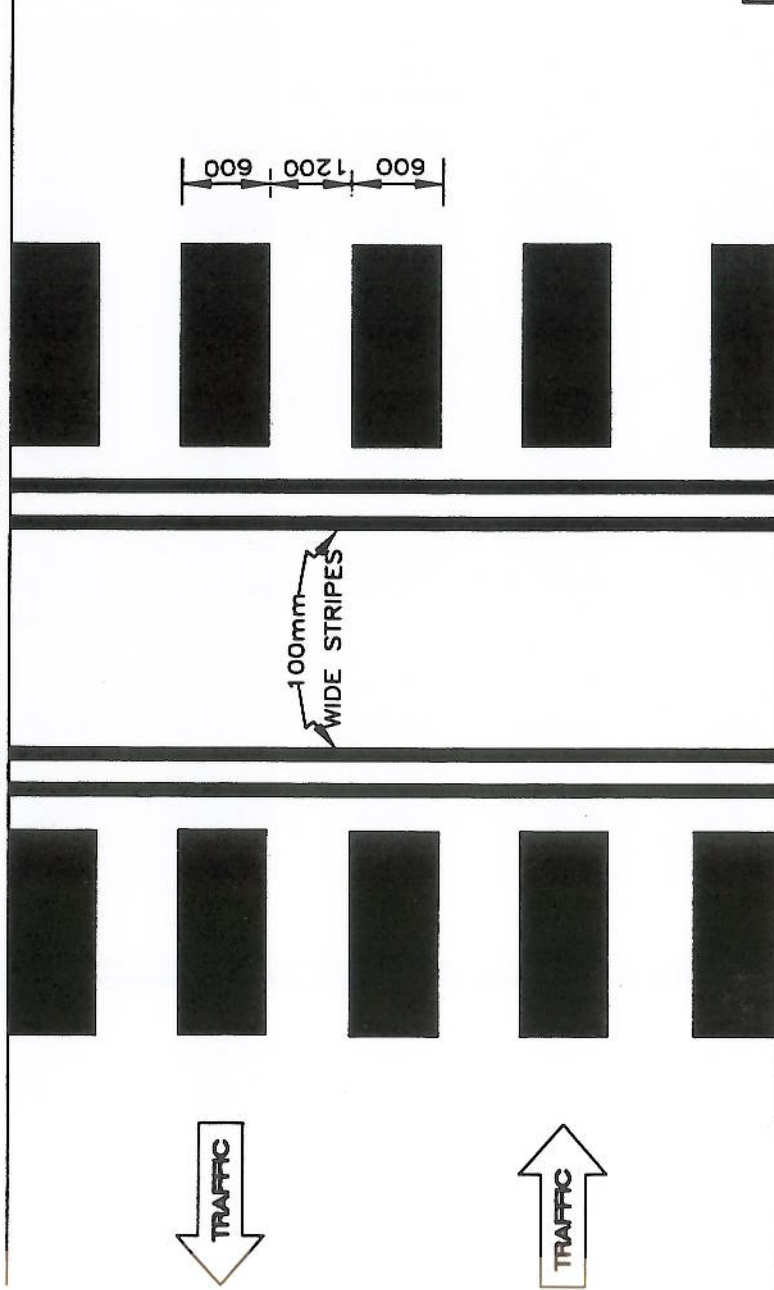
DIRECTOR OF PUBLIC WORKS

DIMENSIONS IN mm EXCEPT AS NOTED

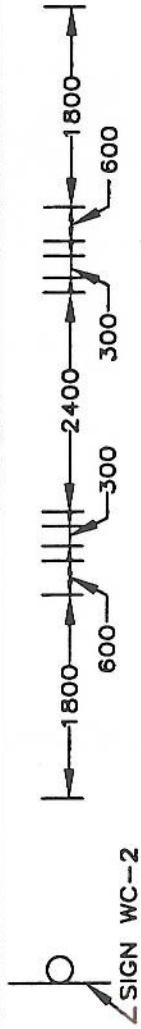
SIGN WC-2



CURB OR EDGE OF PAVEMENT



CURB OR EDGE OF PAVEMENT



SIGN WC-2

MUNICIPALITY: TOWN OF OAKVILLE

PAVEMENT MARKINGS FOR A SUPERVISED SCHOOL CROSSING

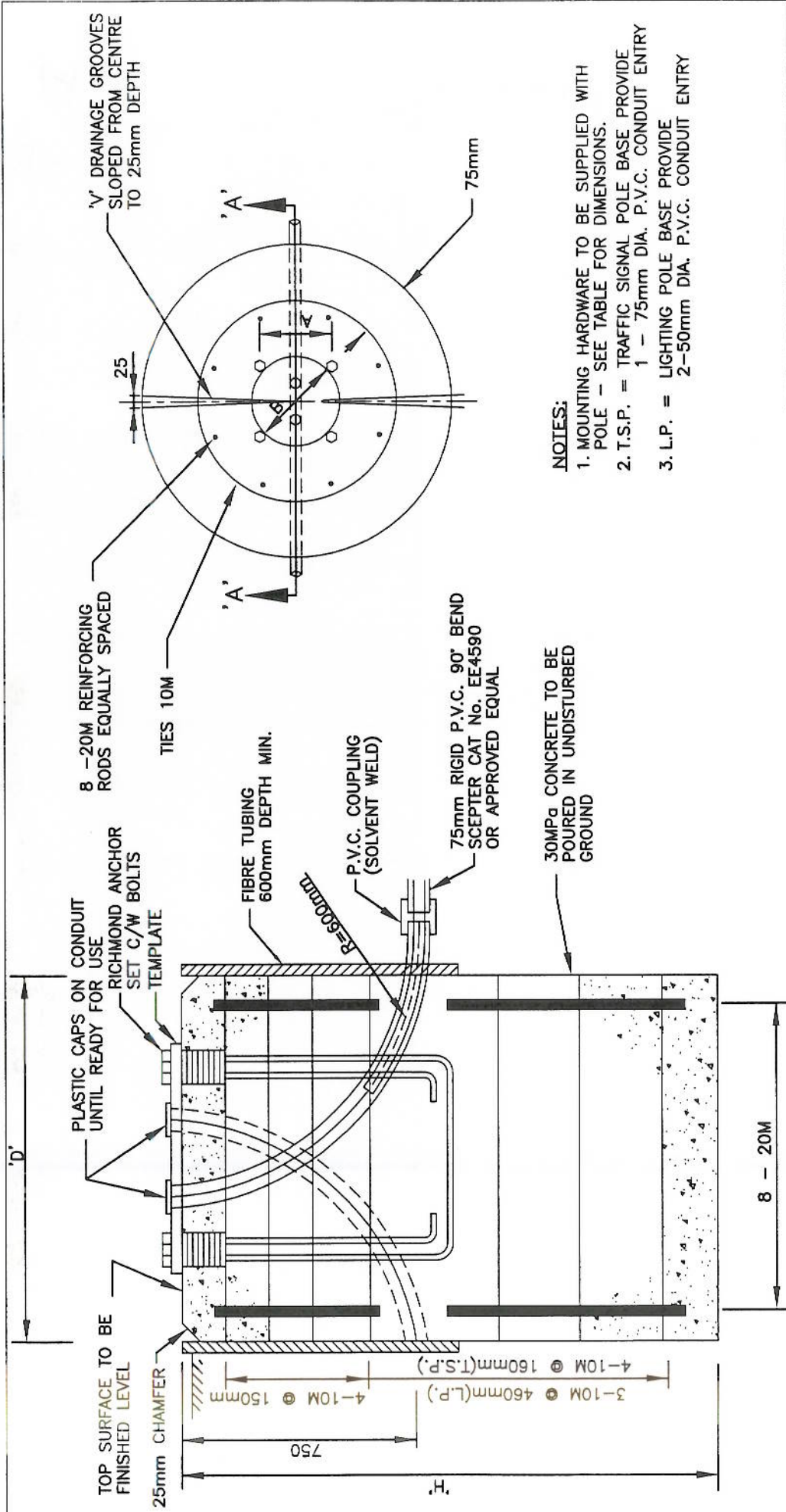
APPROVED *[Signature]*
 DIRECTOR OF PUBLIC WORKS

STD. 9-4

REVISION DATE

03-12-1996

DIMENSIONS IN mm EXCEPT AS NOTED



NOTES:

1. MOUNTING HARDWARE TO BE SUPPLIED WITH POLE - SEE TABLE FOR DIMENSIONS.
2. T.S.P. = TRAFFIC SIGNAL POLE BASE PROVIDE
1 - 75mm DIA. P.V.C. CONDUIT ENTRY
3. L.P. = LIGHTING POLE BASE PROVIDE
2 - 50mm DIA. P.V.C. CONDUIT ENTRY

MUNICIPALITY: TOWN OF OAKVILLE

CONCRETE BASE
FOR LIGHTING AND
TRAFFIC SIGNAL POLES

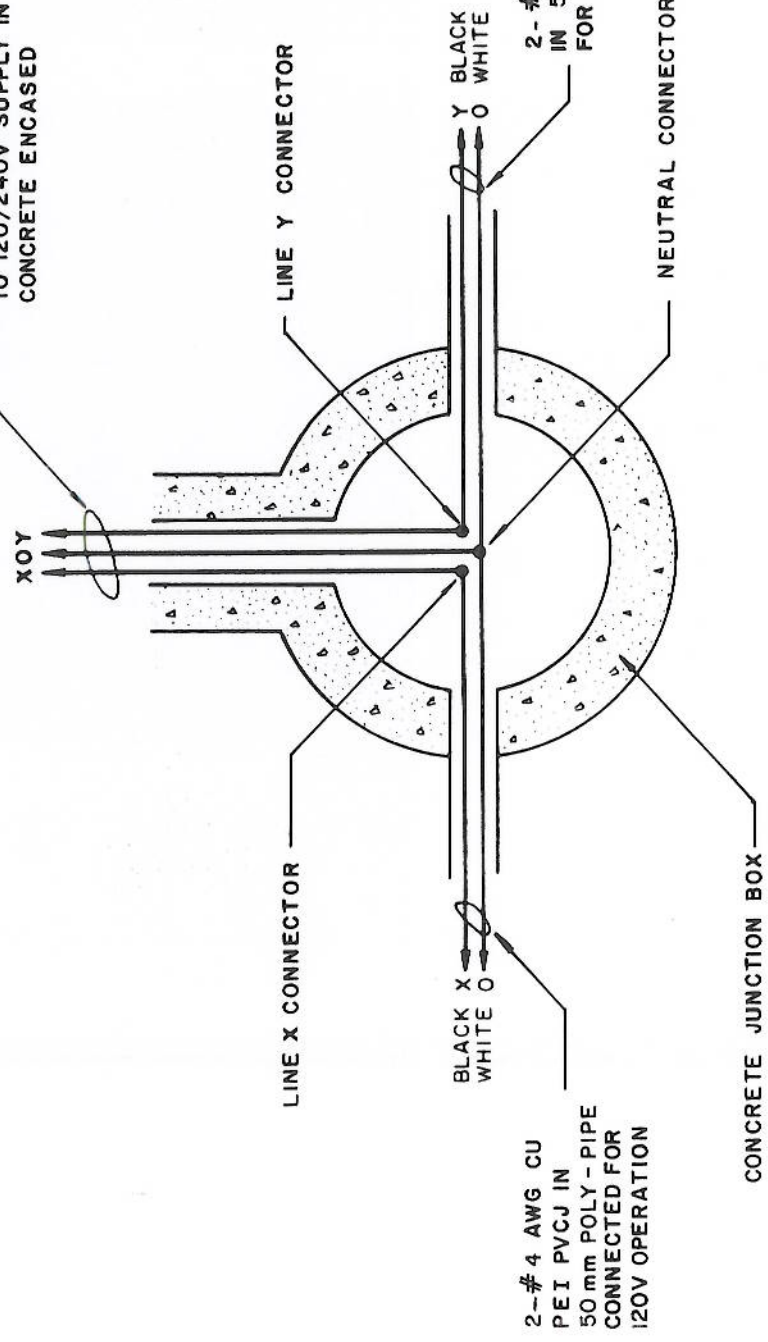
APPROVED *[Signature]* STD. 9 - 5
 REVISION DATE FEB. 24, 2004
 DIRECTOR OF PUBLIC WORKS

VARIABLE DIMENSION	A (mm)	B (mm)	H (mm)	D (mm)
TP15-645C-AB-242	171	242	1.5	450
TP19-866C-AB-292	207	292	2.1	600
TP19-1080E-AB-406	287	406	2.1	750
TP24-845C-AB-292	207	292	2.1	600
ET35-845E-AB-292	207	292	2.5	600
ET35-1055E-AB-406	287	406	2.5	750

POLE SIZE

DIMENSIONS IN mm EXCEPT AS NOTED

3-³/₀ AL TRIPLEX P.E.I., PVCJ SOOV
TO 120/240V SUPPLY IN 100 mm P.V.C. DUCT TYPE I
CONCRETE ENCASED



2-# 4 AWG CU
PEI PVCJ IN
50 mm POLY - PIPE
CONNECTED FOR
120V OPERATION

2-# 4 AWG CU PEI, PVCJ
IN 50 mm POLY - PIPE CONNECTED
FOR 120V OPERATION

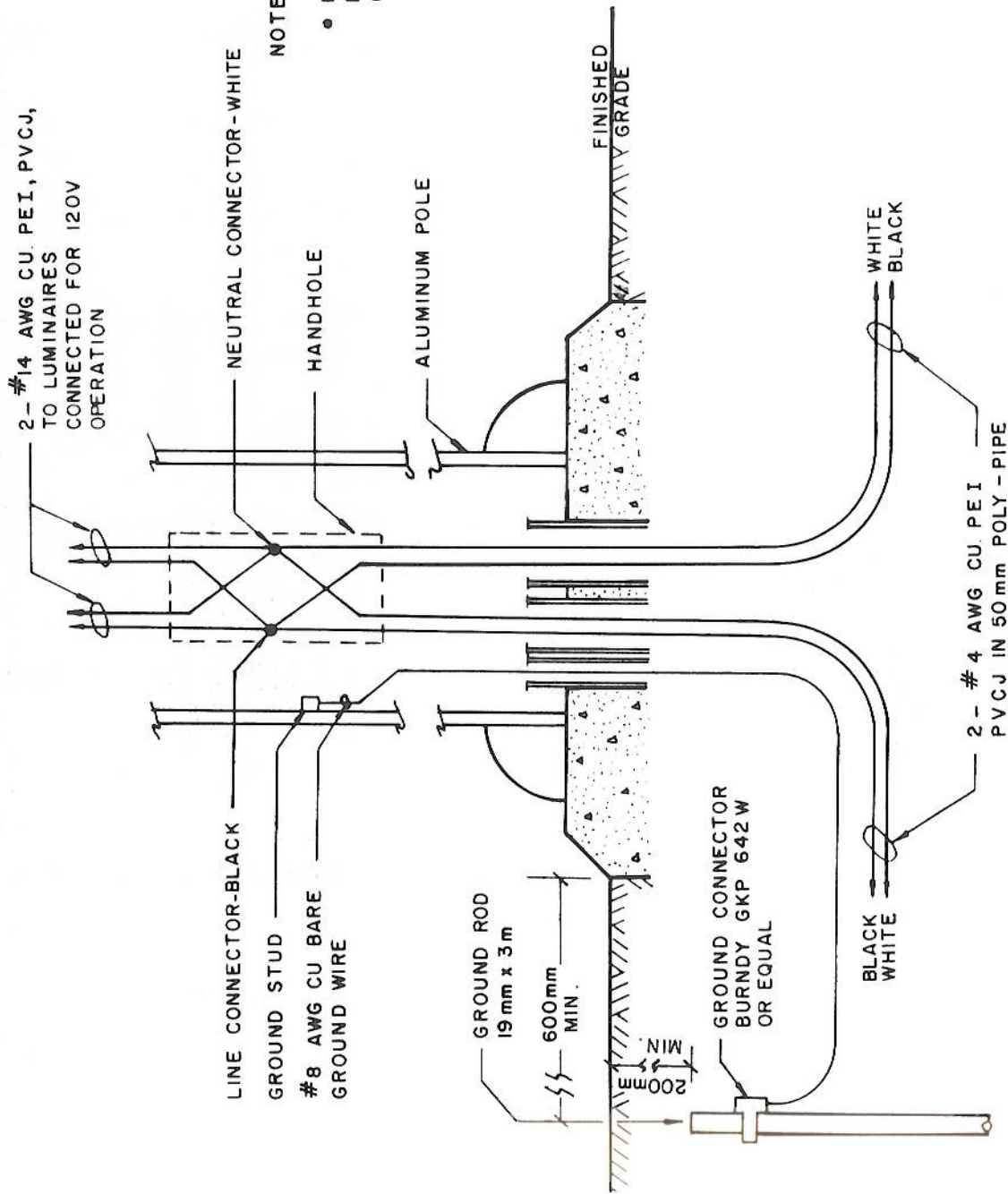
NOTES

- SUBMERSIBLE CONNECTORS TO BE BLACKBURN I.T.T. SQUID' TYPE OR EQUAL C/W COMPRESSION LUGS AND FORCE FIT SEALING SLEEVES.
- ALL CONNECTIONS IN HYDRO JUNCTION BOX TO BE PERFORMED BY OAKVILLE P.U.C. PERSONNEL.

CONNECTION DETAIL IN HYDRO JUNCTION BOX

MUNICIPALITY : TOWN OF OAKVILLE	
CONNECTION DETAIL	
IN HYDRO JUNCTION BOX	
APPROVED <i>[Signature]</i>	STD 9--6
DIRECTOR OF PUBLIC WORKS	REVISION DATE 07201995

DIMENSIONS IN mm EXCEPT AS NOTED



NOTES:

- LINE AND NEUTRAL CONNECTIONS TO BE INSULATED WITH PLASTIC TAPE TO ORIGINAL INSULATION THICKNESS.

MUNICIPALITY : TOWN OF OAKVILLE	
CONNECTION DETAIL IN ALUMINUM STREET LIGHT POLE WITH TWO LUMINAIRES	
APPROVED <i>[Signature]</i>	STD 9-7
DIRECTOR OF PUBLIC WORKS	REVISION DATE 07201995

CONNECTION DETAIL IN ALUMINUM STREET LIGHT POLE WITH TWO LUMINAIRES

DIMENSIONS IN mm EXCEPT AS NOTED

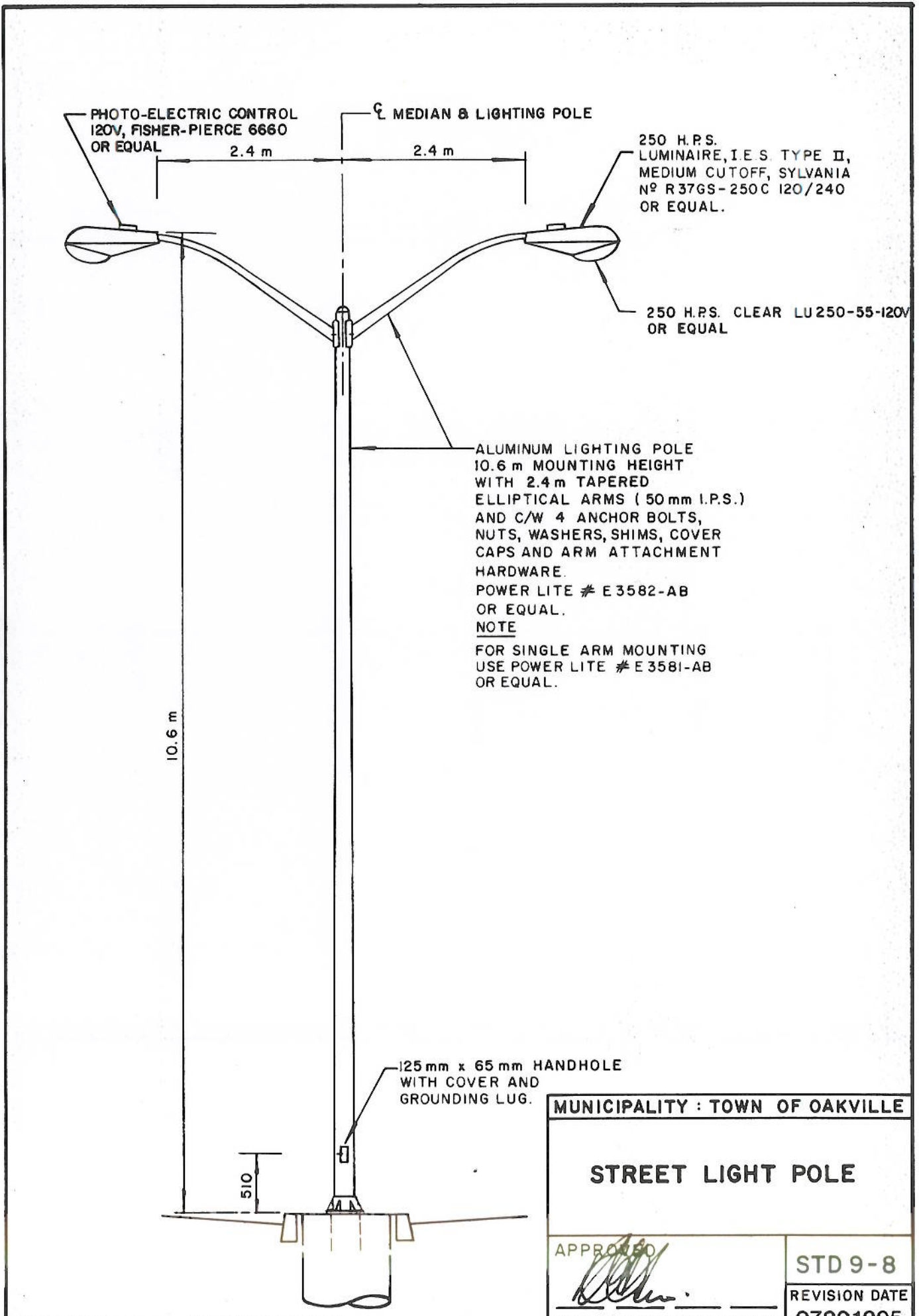


PHOTO-ELECTRIC CONTROL
120V, FISHER-PIERCE 6660
OR EQUAL

☒ MEDIAN & LIGHTING POLE

2.4 m

2.4 m

250 H.P.S.
LUMINAIRE, I.E.S. TYPE II,
MEDIUM CUTOFF, SYLVANIA
Nº R37GS-250C 120/240
OR EQUAL.

250 H.P.S. CLEAR LU250-55-120V
OR EQUAL

10.6 m

ALUMINUM LIGHTING POLE
10.6 m MOUNTING HEIGHT
WITH 2.4 m TAPERED
ELLIPTICAL ARMS (50 mm I.P.S.)
AND C/W 4 ANCHOR BOLTS,
NUTS, WASHERS, SHIMS, COVER
CAPS AND ARM ATTACHMENT
HARDWARE.
POWER LITE # E 3582-AB
OR EQUAL.

NOTE
FOR SINGLE ARM MOUNTING
USE POWER LITE # E 3581-AB
OR EQUAL.

125 mm x 65 mm HANDHOLE
WITH COVER AND
GROUNDING LUG.

510

MUNICIPALITY : TOWN OF OAKVILLE

STREET LIGHT POLE

APPROVED

[Signature]

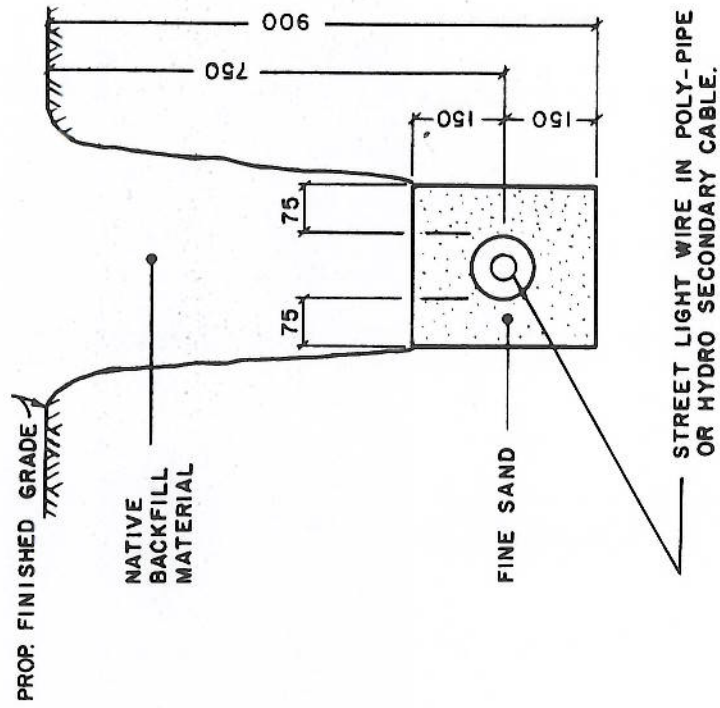
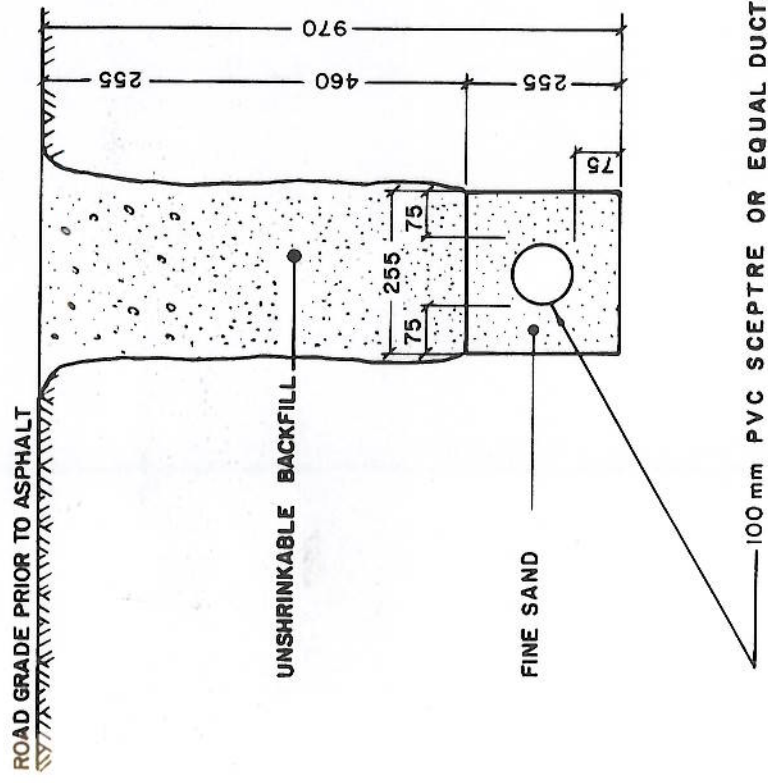
DIRECTOR OF PUBLIC WORKS

STD 9-8

REVISION DATE

07201995

DIMENSIONS IN mm EXCEPT AS NOTED



HYDRO CABLE TRENCH


NOTES

- MACHINE COMPACT AT ONE FOOT INTERVALS.
- 50 mm CROWN REQUIRED IN DUCT AT CENTRE OF ROAD.
- DUCT TO BE CLEANED, PROVED, AND FISHED.

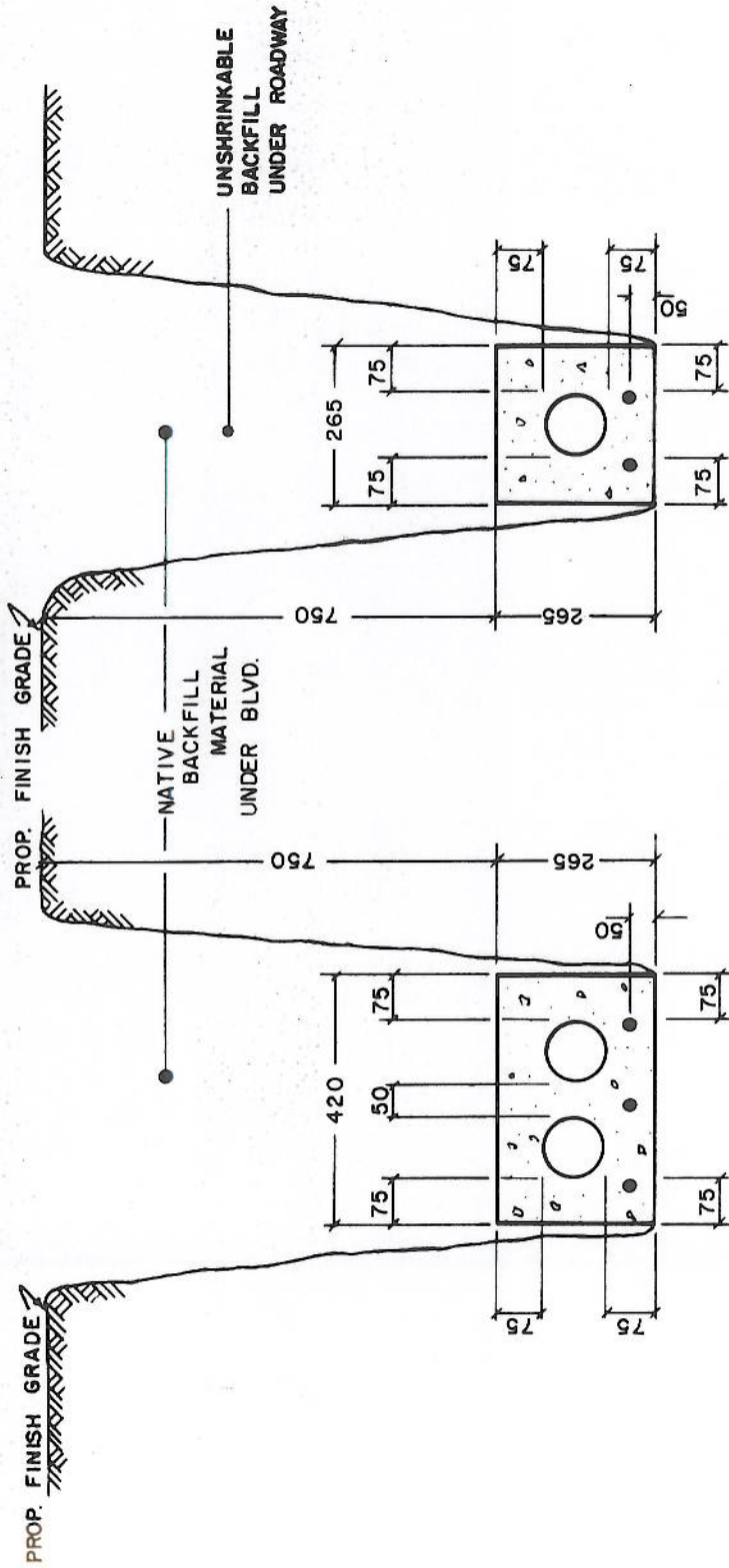
HYDRO ROAD-CROSSING TRENCH

MUNICIPALITY : TOWN OF OAKVILLE

**HYDRO CABLE TRENCH
AND HYDRO
ROAD-CROSSING TRENCH**

	STD 9-9
	REVISION DATE 07201995

DIMENSIONS IN mm EXCEPT AS NOTED



NOTES:

- ALL DUCTS TO BE 100 mm P.V.C. TYPE I FOR CONC. ENCASEMENTS.
- DUCT BANK TO BE SLOPPED 75 mm IN 30 m TOWARDS MANHOLE OR POLE AS SPECIFIED.
- DUCT TO BE ENCASED IN 20 MPa CONCRETE, BRACED WITH PLASTIC OR CONCRETE DUCT SUPPORTS SPACED AT 10 FOOT INTERVALS AND WIRE BANDED.
- DUCT JOINTS ARE TO BE STAGGERED
- REINFORCING RODS ARE TO BE 12mm (SOLID ROUND) AND ARE REQUIRED ONLY AT ROAD CROSSINGS AND CROSSING OTHER UTILITIES.
- BELL ENDS ARE TO BE USED FOR EACH DUCT TERMINATION IN A MANHOLE OR PULLING PIT.
- DUCT BANK TO BE PROVED AND CLEANED BY PASSING A 100 mm STEEL BRUSH AND 95 mm MANDREL THROUGH EACH DUCT UPON COMPLETION.
- EACH DUCT TO BE FISHED USING A #12 AL PVC JACKET FISH WIRE AND THEN CAPPED OR SEALED WITH PVC PLUG.

DIMENSIONS IN mm EXCEPT AS NOTED

MUNICIPALITY : TOWN OF OAKVILLE

STANDARD CONCRETE
ENCASED DUCT
ARRANGEMENTS

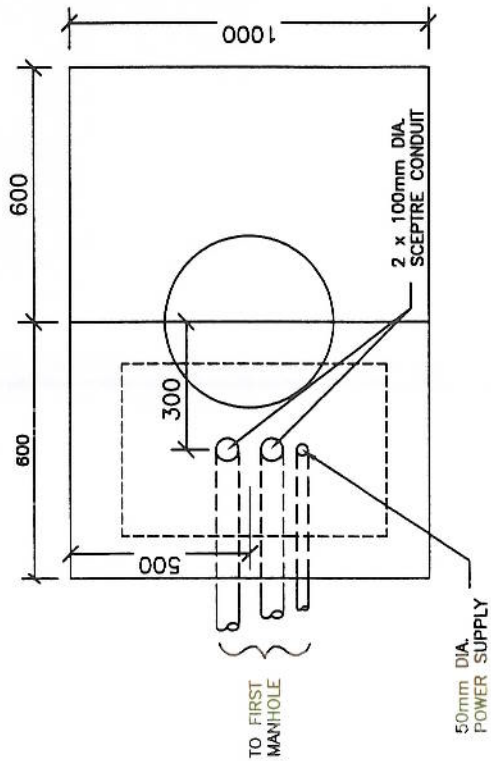
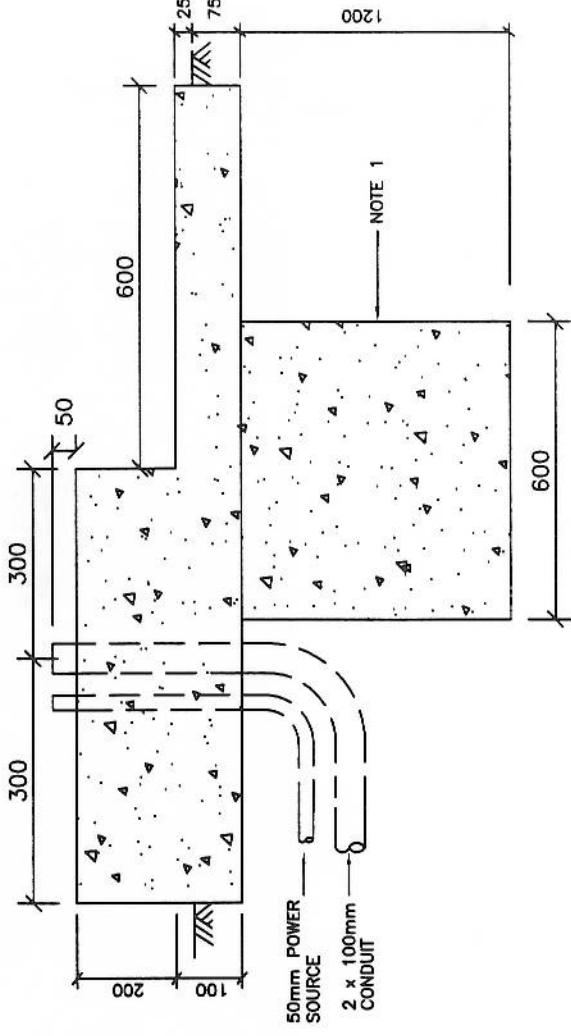
APPROVED
[Signature]

STD 9-10

REVISION DATE

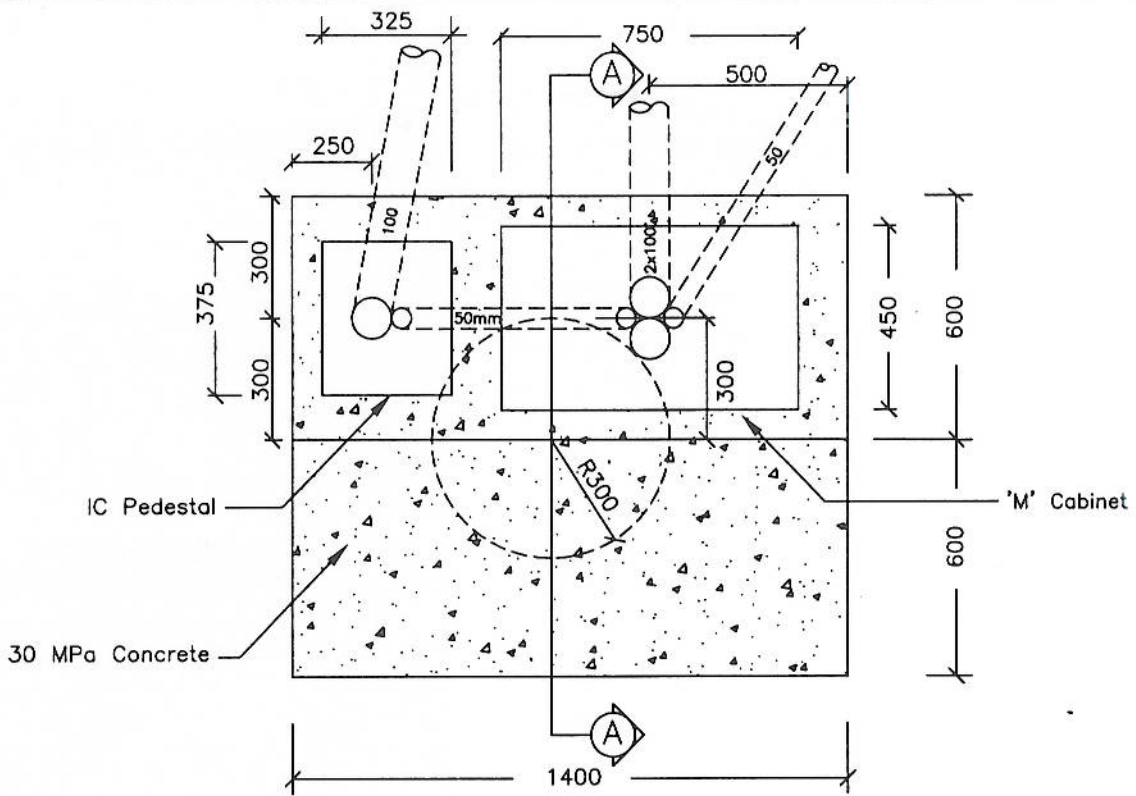
07201995

DIRECTOR OF PUBLIC WORKS

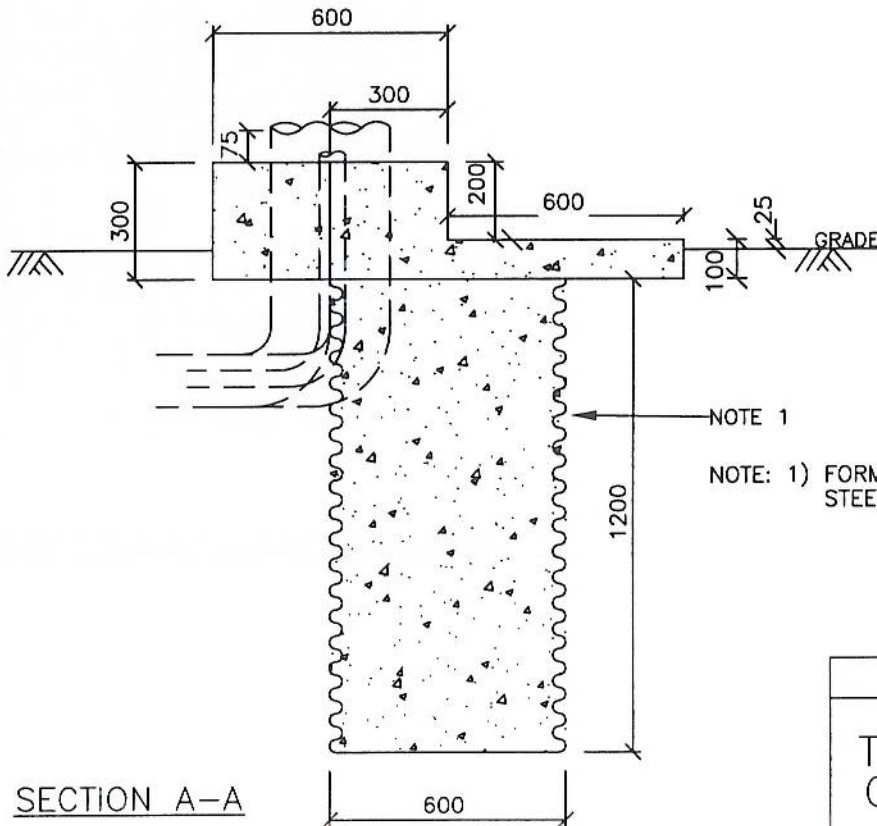


NOTE: 1) FORM TO BE 600mm DIA. CORRUGATED STEEL CULVERT PIPE.

TOWN OF OAKVILLE	
TRAFFIC CONTROL 'M' CABINET FOUNDATION	
APPROVED <i>[Signature]</i> DIRECTOR OF PUBLIC WORKS	STD. 9-11 REVISION DATE FEB. 24, 2004



PLAN



NOTE 1

NOTE: 1) FORM TO BE 600mm DIA. CORRUGATED STEEL CULVERT PIPE.

SECTION A-A

TOWN OF OAKVILLE

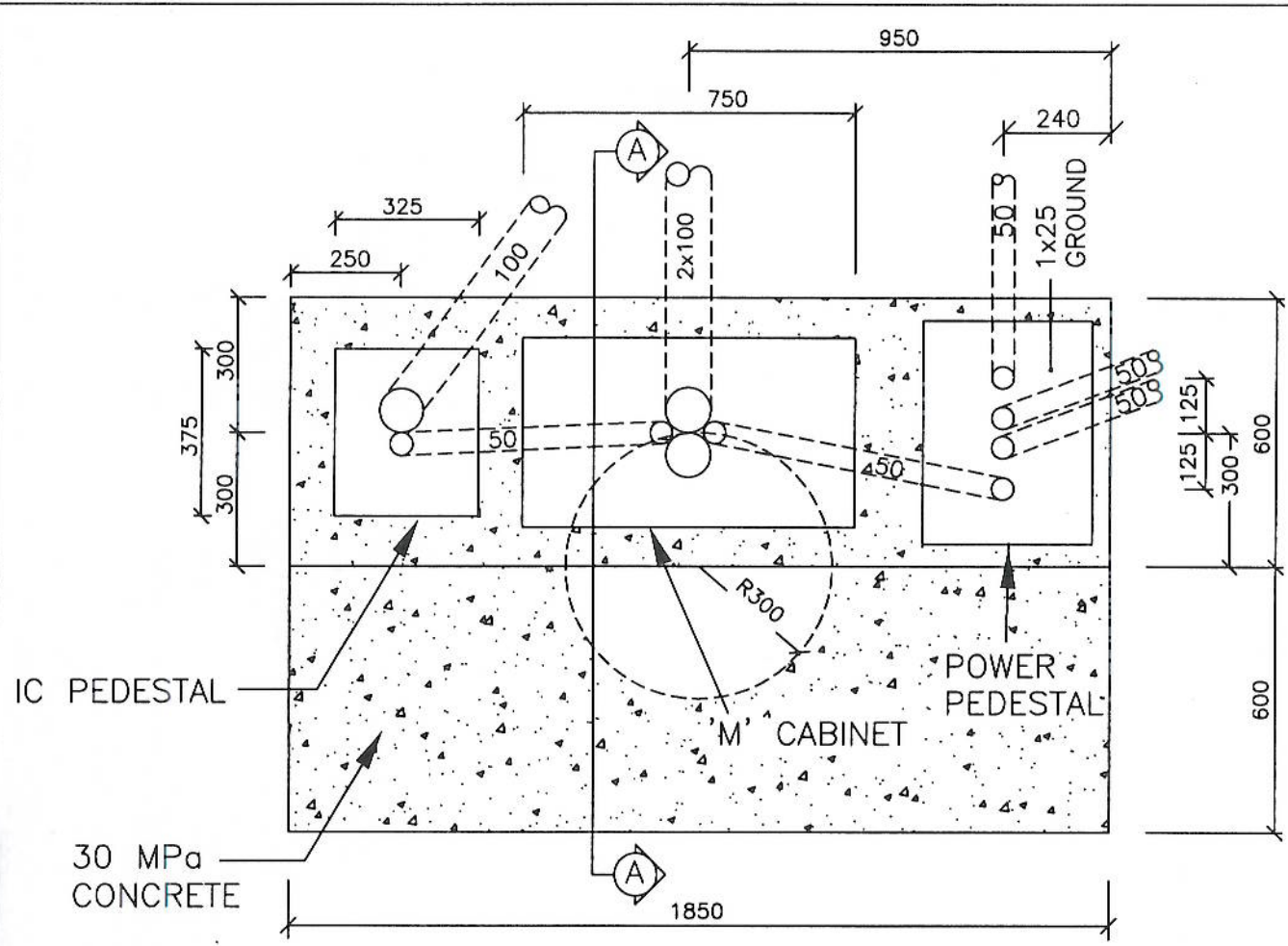
TRAFFIC CONTROL 'M'
CABINET FOUNDATION
WITH IC PED.

APPROVED

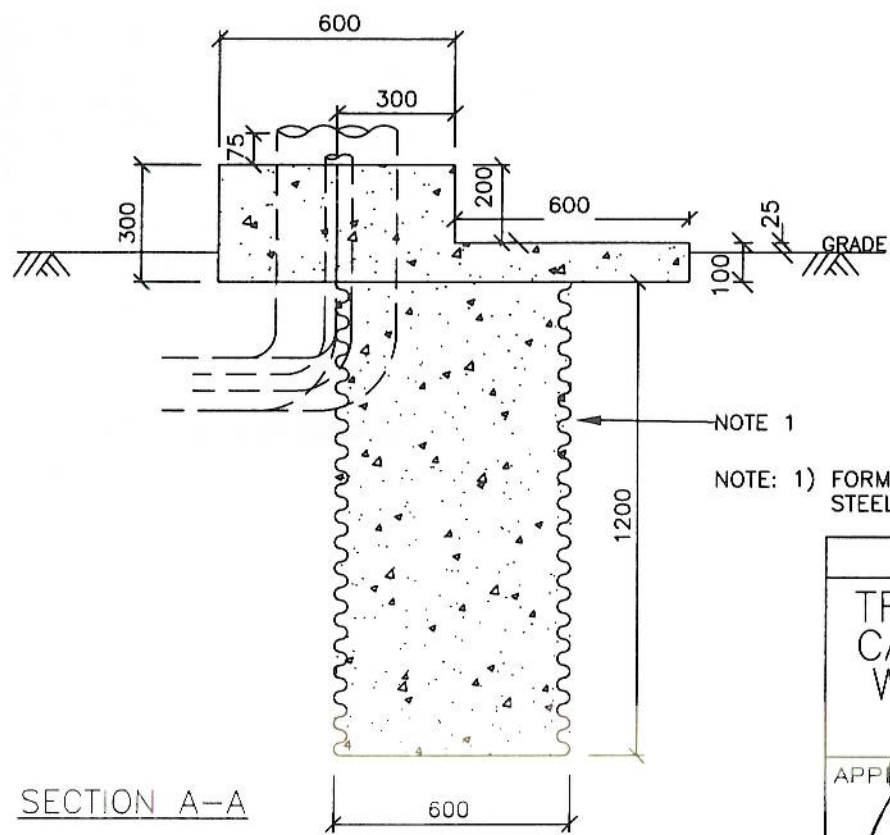
DIRECTOR OF ENGINEERING
AND CONSTRUCTION

STD. 9-11A

REVISION DATE
JULY, 2008



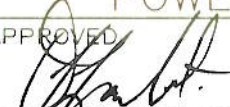
PLAN

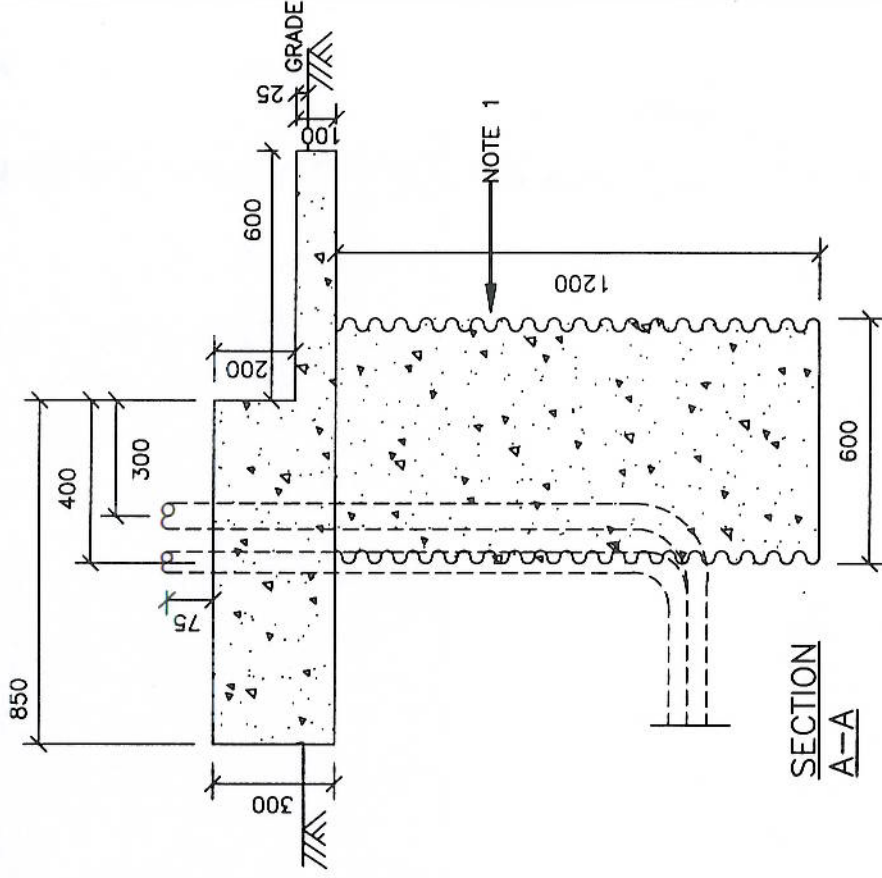


SECTION A-A

NOTE 1

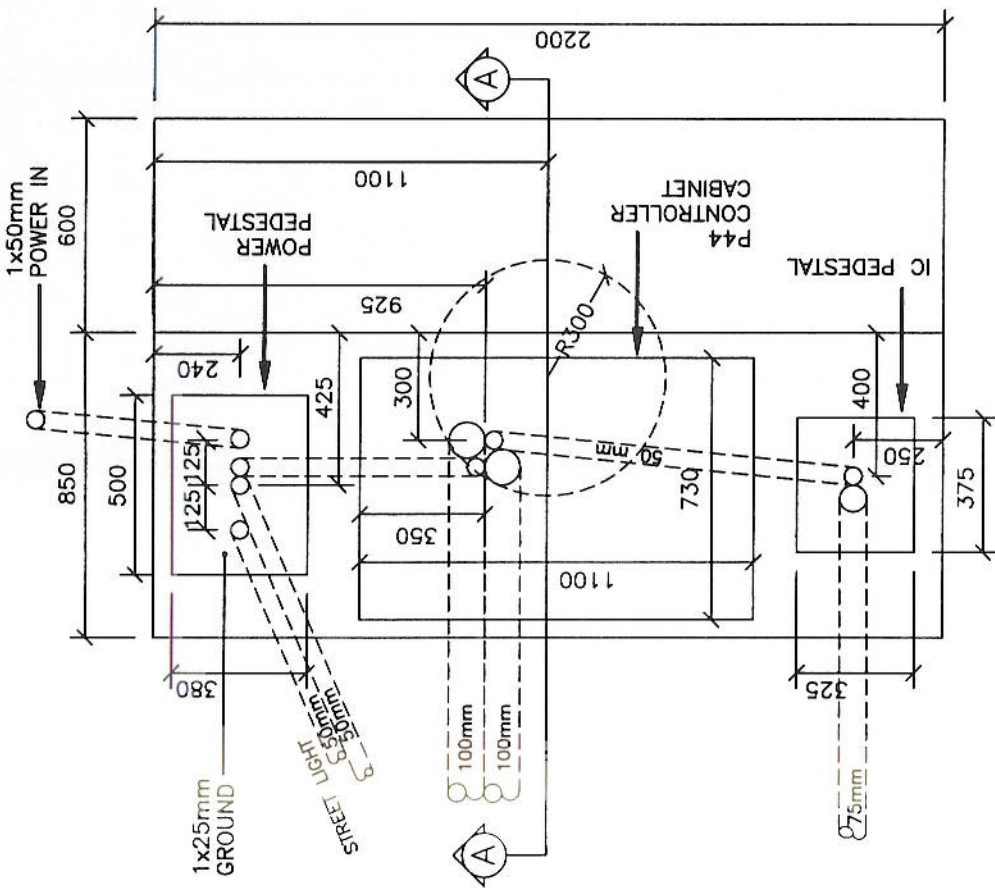
NOTE: 1) FORM TO BE 600mm DIA. CORRUGATED STEEL CULVERT PIPE.

TOWN OF OAKVILLE	
TRAFFIC CONTROL 'M' CABINET FOUNDATION WITH IC PED. AND POWER PED.	
APPROVED 	STD. 9-11B
DIRECTOR OF ENGINEERING AND CONSTRUCTION	DATE APPROVED JULY, 2008



NOTE: 1) FORM TO BE 600mm DIA. CORRUGATED STEEL CULVERT PIPE.

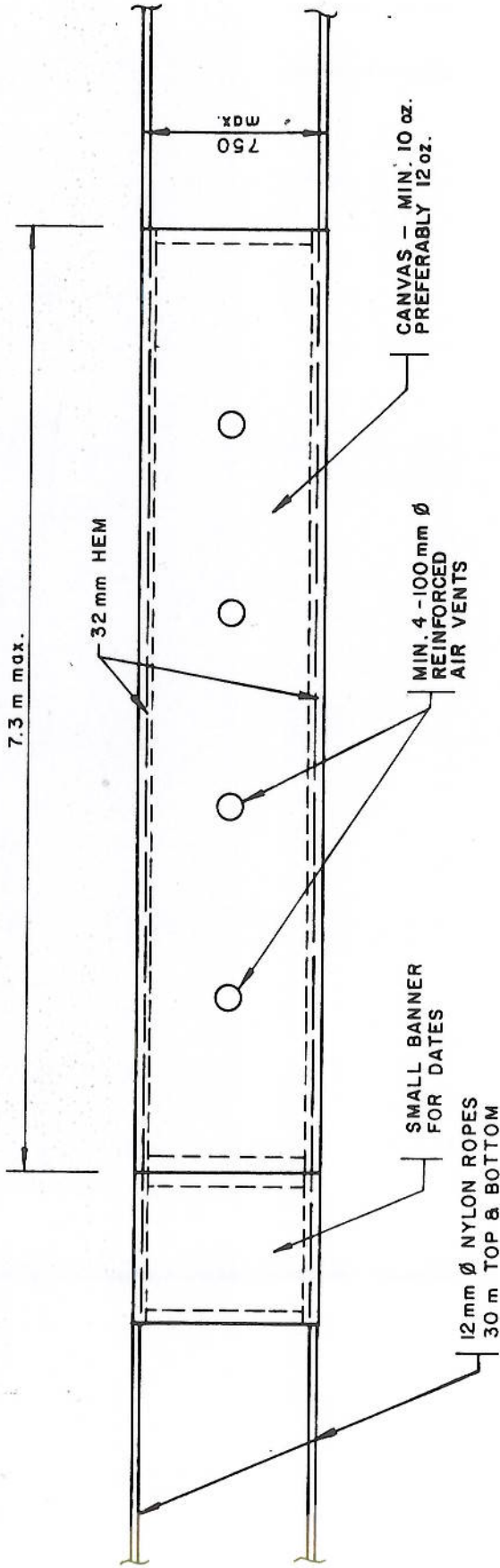
SECTION A-A



PLAN

DIMENSIONS IN mm EXCEPT AS NOTED

TOWN OF OAKVILLE	
TRAFFIC CONTROL 'P44' CABINET FOUNDATION WITH IC PED. AND POWER PED.	
APPROVED <i>[Signature]</i> DIRECTOR OF ENGINEERING & CONSTRUCTION	STD. 9-1C DATE APPROVED JULY, 2008

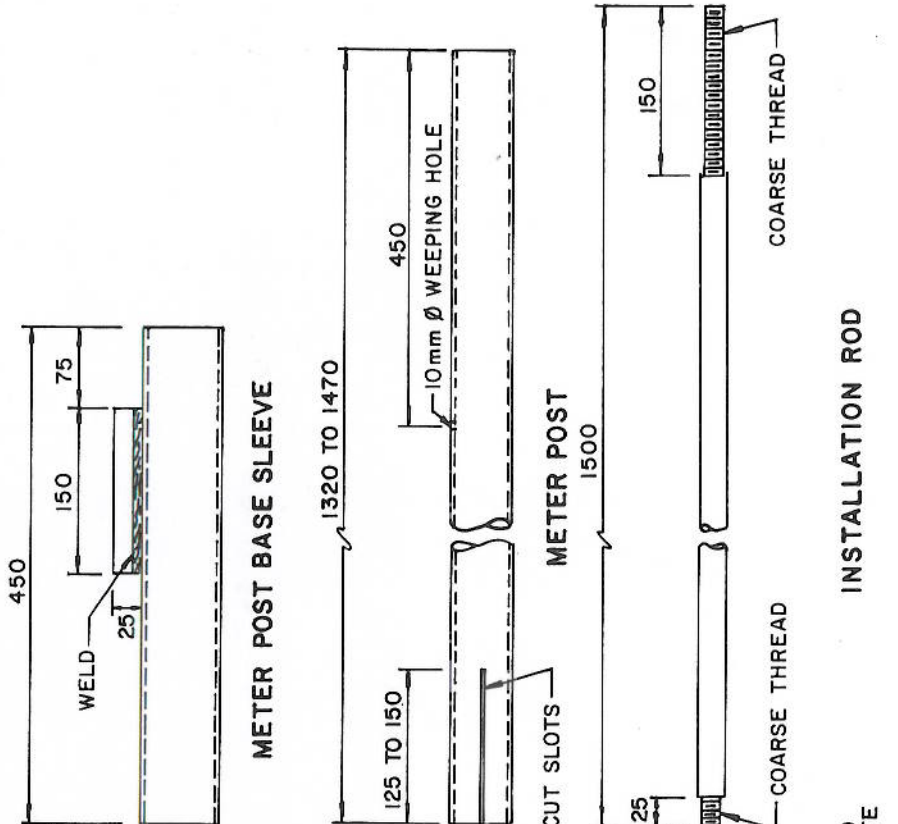


MUNICIPALITY : TOWN OF OAKVILLE

**STANDARD REQUIREMENTS
FOR BANNERS**
(ERECTED OVER PUBLIC ROAD)

APPROVED	STD 9-12
	REVISION DATE
DIRECTOR OF PUBLIC WORKS	07201995

DIMENSION IN mm EXCEPT AS NOTED



32 mm HEX NUT - COARSE THREAD
 16 mm THICK WASHERS - 4 MIN.

50 mm Ø METER POST

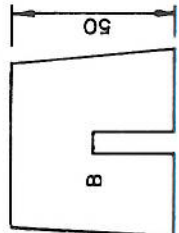
CONCRETE SIDEWALK

65 mm Ø BASE SLEEVE

GRANULAR BASE

METER POST PLUG

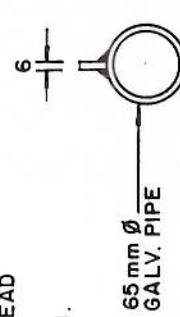
INSTALLATION METER POST & BASE SLEEVE INSTALLED



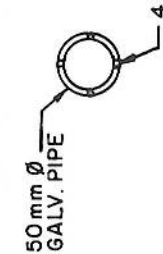
6

METER POST PLUG

DIMENSIONS IN mm EXCEPT AS NOTED

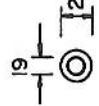


65 mm Ø GALV. PIPE



50 mm Ø GALV. PIPE

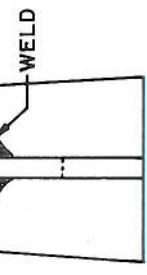
4 SAW CUT SLOTS



19

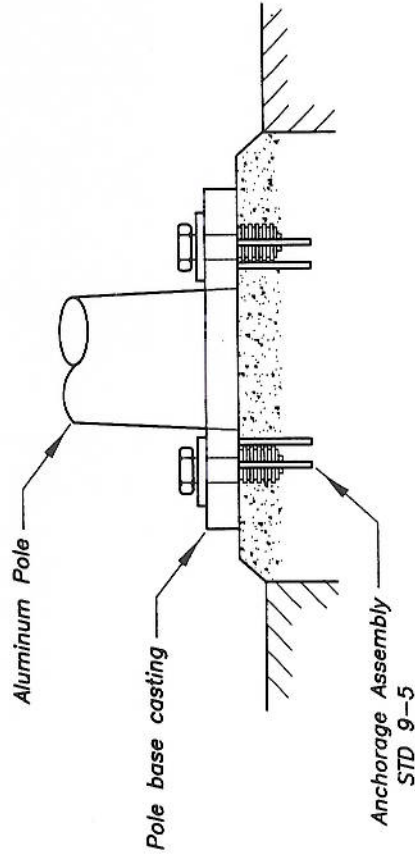
6 mm FLAT MILD STEEL PLATE

32 mm HEX NUT - COARSE THREAD



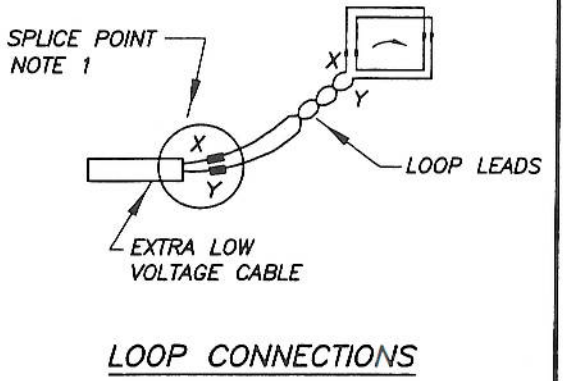
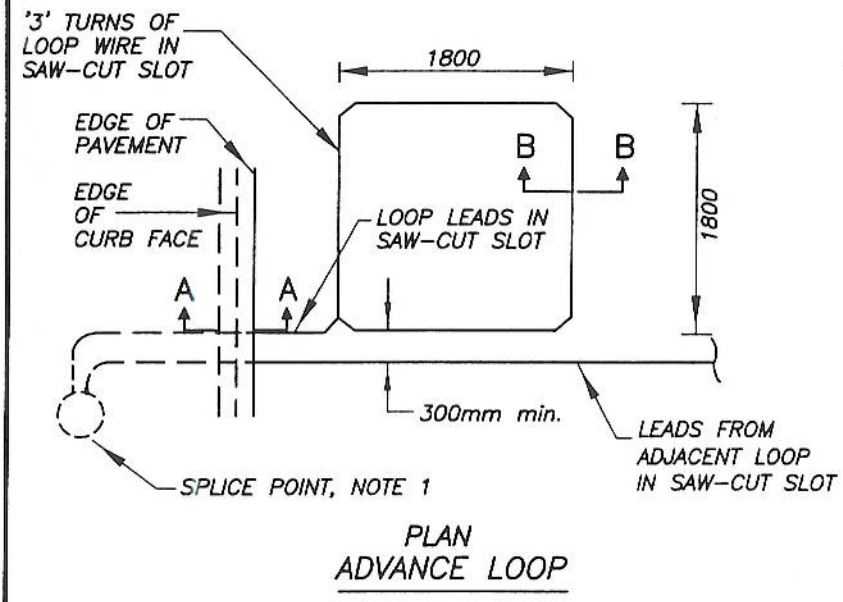
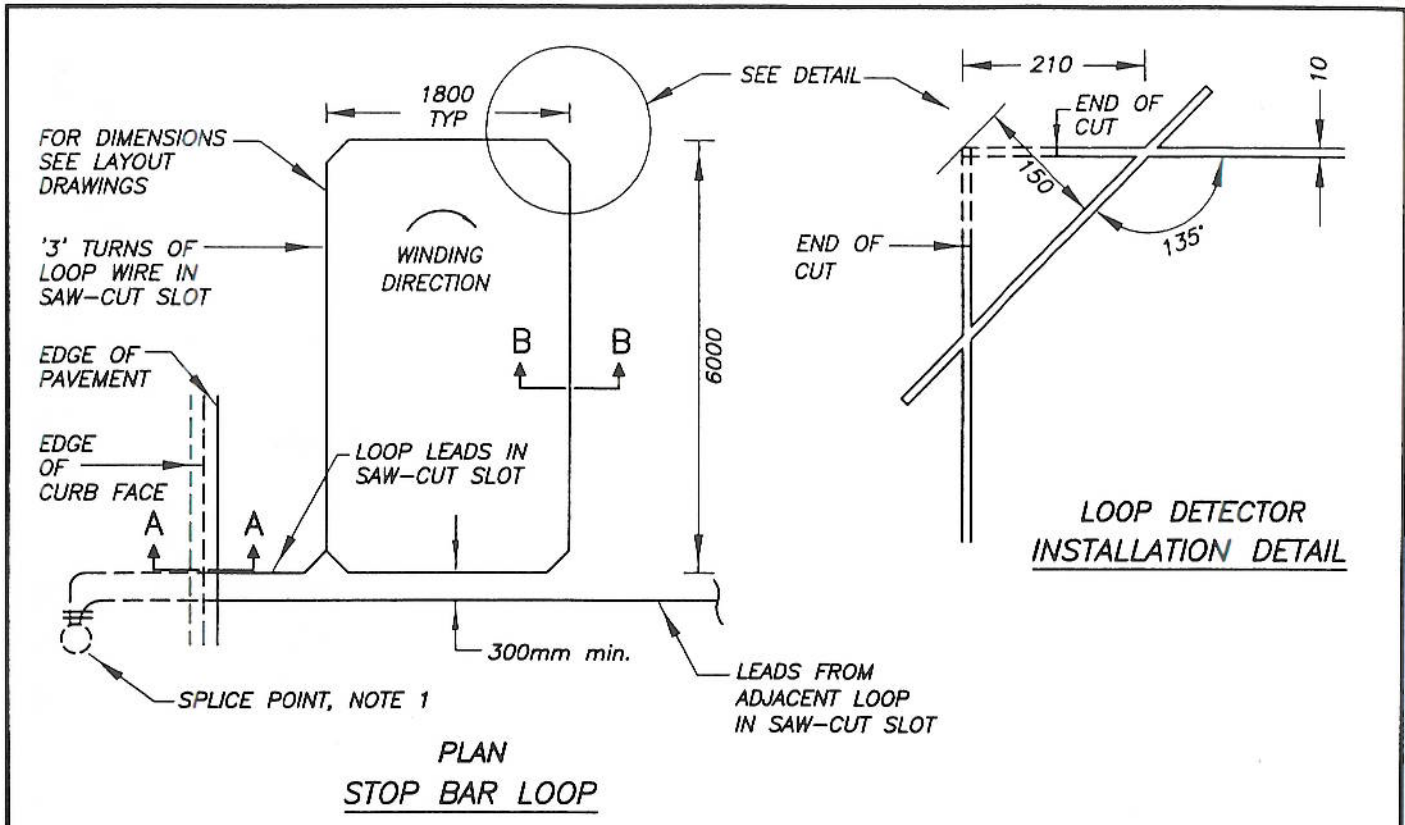
WELD

MUNICIPALITY : TOWN OF OAKVILLE	
METER POST	
APPROVED	STANDARD: STD 9-13
	REVISION DATE: 07201995
DIRECTOR OF PUBLIC WORKS	




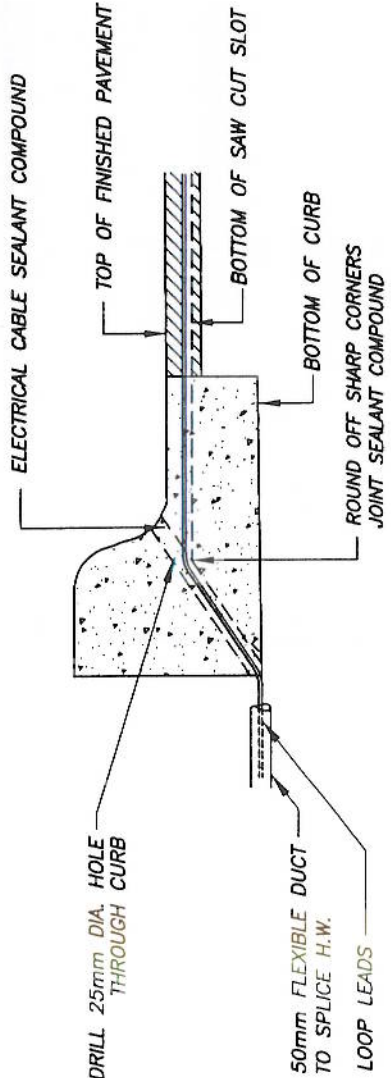
BOLT ASSEMBLY

MUNICIPALITY: TOWN OF OAKVILLE	
POLE MOUNTING DETAILS	
FOR BASE MOUNTED	
ALUMINUM POLE	
APPROVED	STD. 9-14
<i>W. R. ...</i>	REVISION DATE
DIRECTOR OF PUBLIC WORKS	FEB. 24, 2004

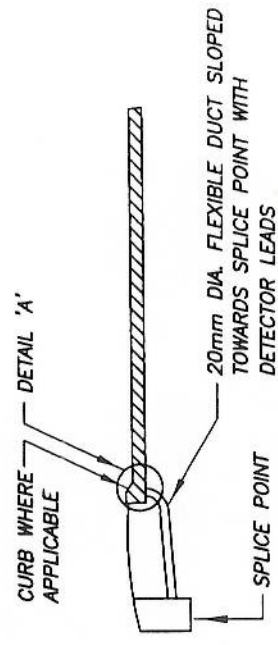


- NOTES:**
1. SPlice TO BE MADE IN JUNCTION BOX, HANDHOLE OR POLE HANDHOLE REFER TO LAYOUT DRAWINGS.
 - A. FOR SECTIONS A-A & B-B, REFER TO STD. 9-16
 - B. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN.
 2. HEAD OF LOOP TO BE SET:
 - A. 1.0m AHEAD OF THE STOP BAR.
 - B. 1.0m BEHIND THE FRONT LOOP IN DUAL LOOP CONFIGURATION, OR, AS SPECIFIED.

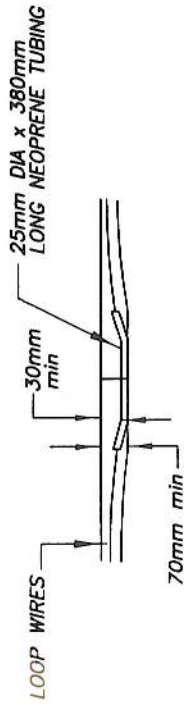
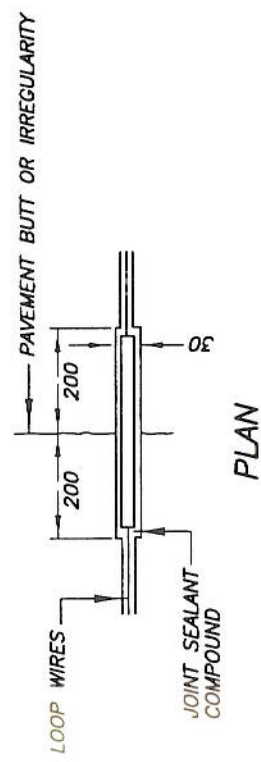
MUNICIPALITY: TOWN OF OAKVILLE	
LOOP DETECTOR INSTALLATION DETAIL 1	
APPROVED  DIRECTOR OF PUBLIC WORKS	STD. 9-15 DATE APPROVED MARCH 1, 2004



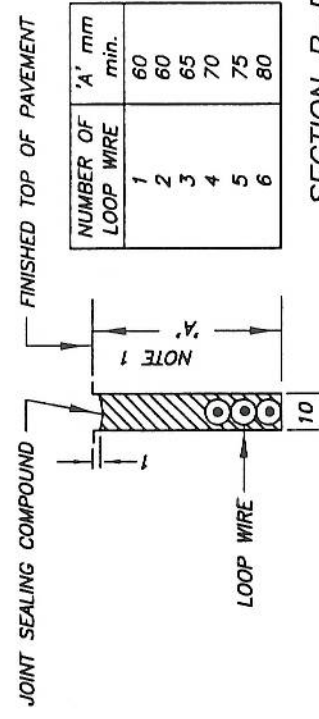
DETAIL 'A'



SECTION A-A
OF STD. 9-15



DETAIL - PAVEMENT BUTT OR IRREGULARITY



NUMBER OF LOOP WIRE	'A' mm min.
1	60
2	60
3	65
4	70
5	75
6	80

SECTION B-B
OF STD. 9-15

NOTES:

1. WHERE CABLE IS INSTALLED PRIOR TO THE FINISHED TOP COURSE PAVING, THE MAXIMUM DEPTH OF COVER SHALL BE 100mm.

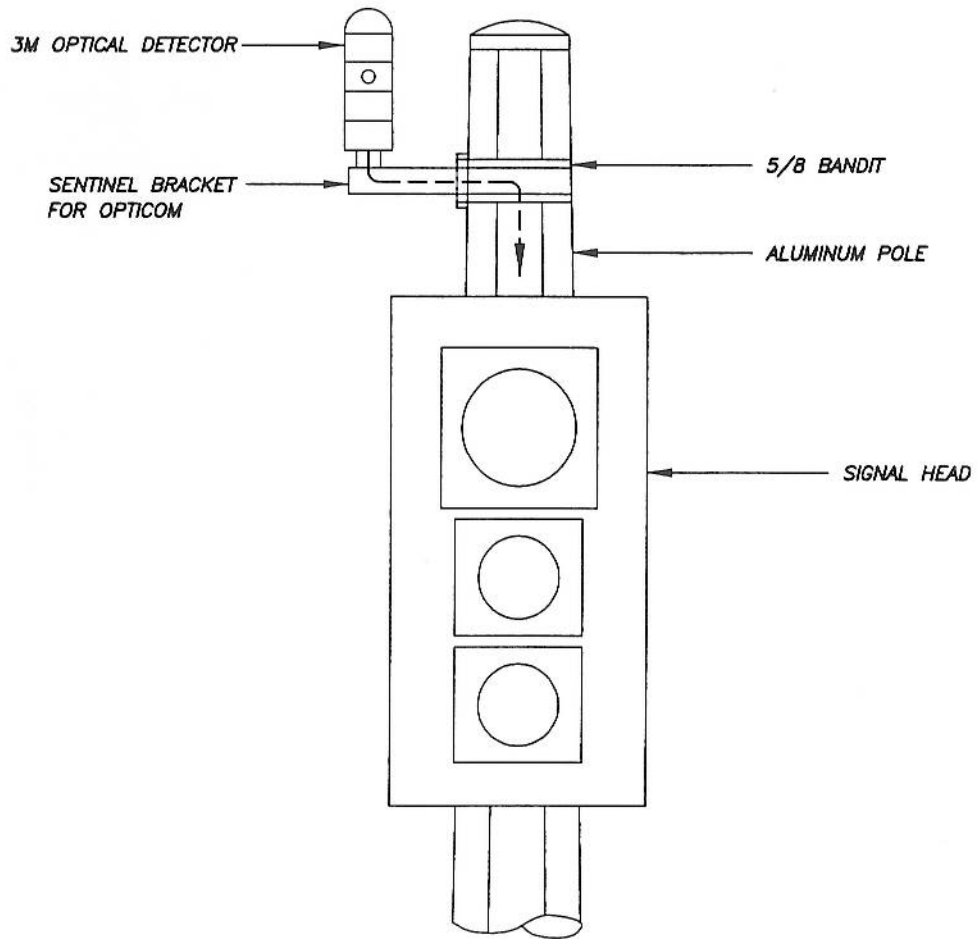
A. ALL DIMENSIONS ARE IN MILLIMETRES OR METRES UNLESS OTHERWISE SHOWN.

MUNICIPALITY: TOWN OF OAKVILLE

LOOP DETECTORS
INSTALLATION DETAILS II

APPROVED
[Signature]
DIRECTOR OF PUBLIC WORKS

STD. 9-16
DATE APPROVED
MARCH 1, 2004



MUNICIPALITY: TOWN OF OAKVILLE

**"3M" OPTICAL DETECTOR
MOUNTING**

APPROVED

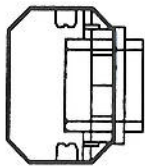
W. H. [Signature]
DIRECTOR OF PUBLIC WORKS

STD. 9-17

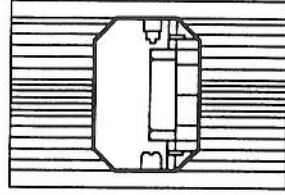
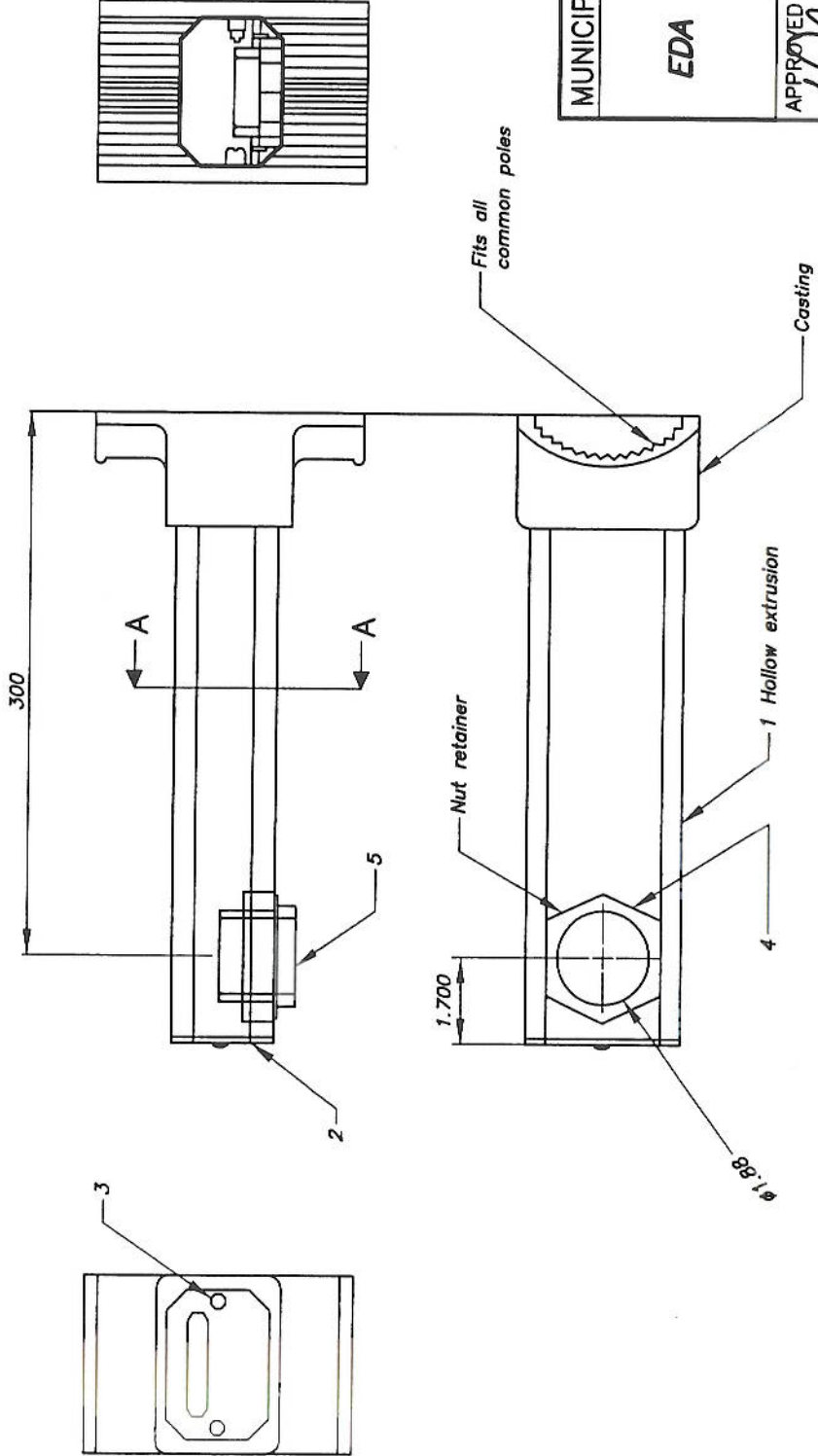
DATE APPROVED

MARCH 1, 2004

Item	Part #	Part Name	Qty
1	S1005-1	Base plate and Arm assembly	1
2	S1005-2	Cover plate	1
3	S1005-3	#8 Self tapping S/S screw	2
4	S1005-4	1-1/2 x 11-1/2 TPI Nut	1
5	S1005-5	1-1/2 x 11-1/2 TPI nipple	1



View A-A



MUNICIPALITY: TOWN OF OAKVILLE

EDA "300" ALUMINUM ARM

APPROVED

[Signature]

DIRECTOR OF PUBLIC WORKS

STD. 9-18

DATE APPROVED

MARCH 1, 2004

Application:

Use part DBY, which includes a Scotchlock® Y Electrical Spring Connector, to electrically connect two or more pre-stripped copper wire ends in a pigtail application and moisture seal the connection for direct burial.

Wire:

Common AWG wire combinations
(Copper wire only, sol or str)

- 2-3 # 16 1 # 18 to 1-2 # 14
- 2-3 # 14 1 # 18 to 1-2 # 12
- 2 # 12 1 # 16 to 1-2 # 12
- 1 # 14 to 1 # 12

Consult technical service for complete list of wire combinations.

Construction:

- Connector - steel spring, shell, flame retardant pvc insulator
- Tube - polypropylene
- Gel - thixotropic calcium organic complex

Engineering Specification:

The device, 3M Brand DBY Direct Bury Splice Kit, shall splice and effectively moisture seal two or more conductors. The electrical connector shall be a Scotchlock® Y. The device shall be installed per manufacturer's instructions and all applicable codes.

Application Data:

Application Temperature: 32°F to 120°F
(0°C to 40°C)

Operating Temperature: 221°F to -40°F
(105°C to -40°C)

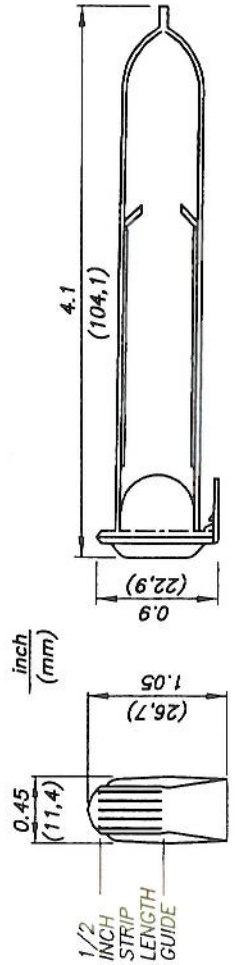
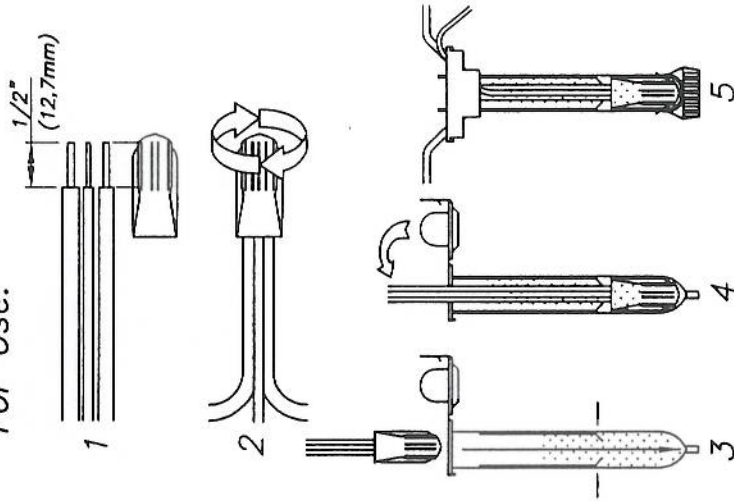
Voltage Rating: 30 Volts

Not for use in direct ultraviolet exposure

Weight of one kit: (2 splices) .0612 lbs
(27,92gm)

Storage: Do not store above 120°F (49°C)

Instruction For Use:



MUNICIPALITY: TOWN OF OAKVILLE

DIRECT BURY (DBY) SPLICE KIT

APPROVED

W. J. [Signature]
DIRECTOR OF PUBLIC WORKS

STD. 9-19

DATE APPROVED
MARCH 1, 2004

Application:

Use part DBY, which includes a Scotchlock® Y Electrical Spring Connector, to electrically connect two or more pre-stripped copper wire ends in a pigtail application and moisture seal the connection for direct burial.

Wire:

Common AWG wire combinations
(Copper wire only, sol or str)

- 2-3 # 16 1 # 18 to 1-2 # 14
- 2-3 # 14 1 # 18 to 1-2 # 12
- 2 # 12 1 # 16 to 1-2 # 12
- 1 # 14 to 1 # 12

Consult technical service for complete list of wire combinations.

Construction:

- Connector - steel spring, shell, flame retardant pvc insulator
- Tube - polypropylene
- Gel - thixotropic calcium organic complex

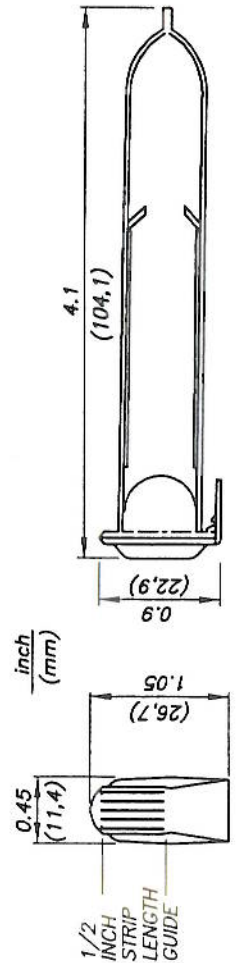
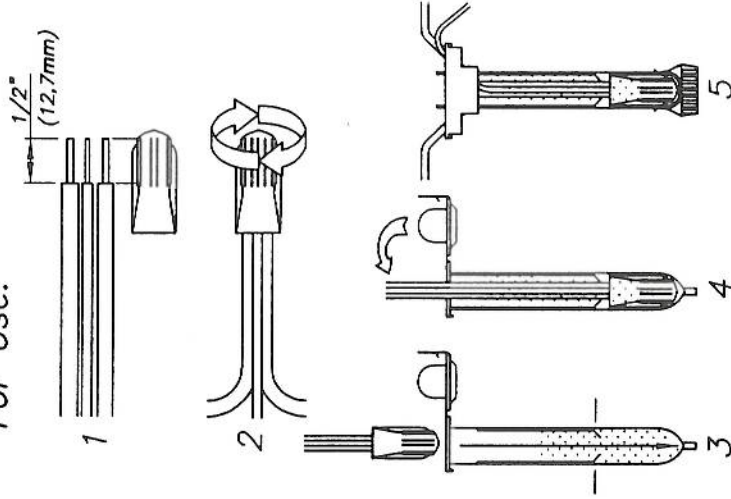
Engineering Specification:

The device, 3M Brand DBY Direct Bury Splice Kit, shall splice and effectively moisture seal two or more conductors. The electrical connector shall be a Scotchlock® Y. The device shall be installed per manufacturer's instructions and all applicable codes.

Application Data:

- Application Temperature: 32°F to 120°F (0°C to 40°C)
- Operating Temperature: 221°F to -40°F (105°C to -40°C)
- Voltage Rating: 30 Volts
- Not for use in direct ultraviolet exposure
- Weight of one kit: (2 splices) .0612 lbs (27,92gm)
- Storage: Do not store above 120°F (49°C)

Instruction For Use:

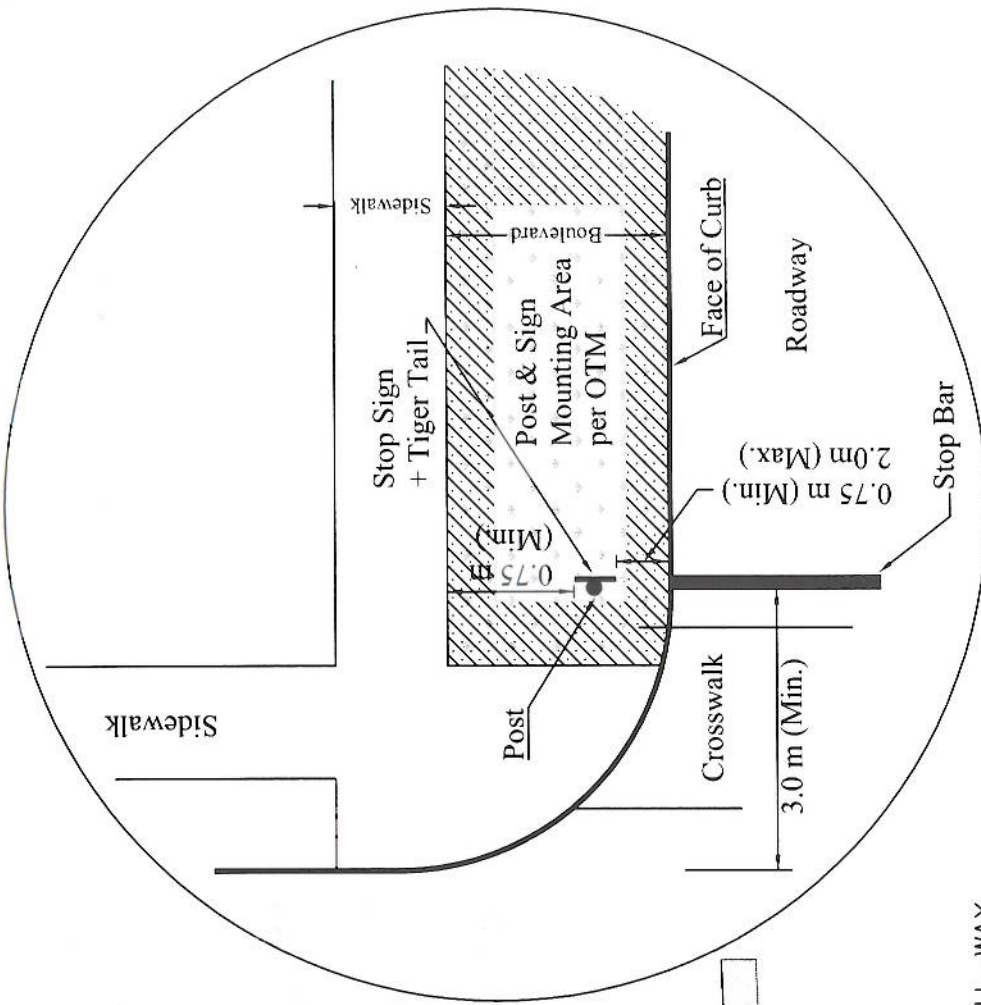
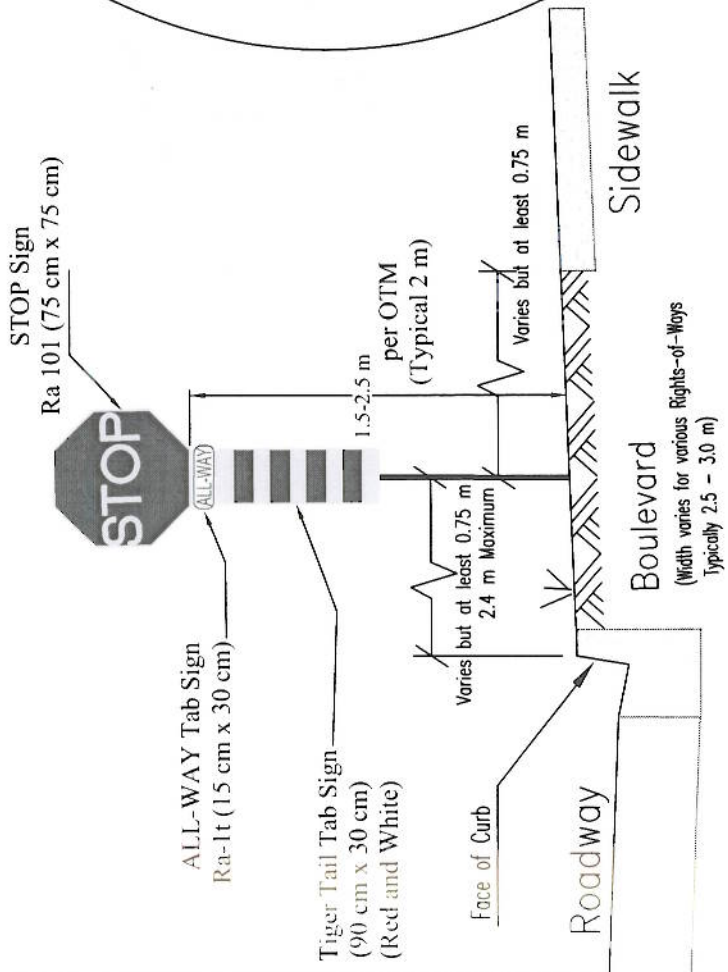


MUNICIPALITY: TOWN OF OAKVILLE

DIRECT BURY (DBY) SPLICE KIT

APPROVED: *[Signature]* DATE APPROVED: STD. 9-19

DIRECTOR OF PUBLIC WORKS: MARCH 1, 2004



NOTES:

THIS GUIDELINE IS APPLICABLE FOR THE INSTALLATION OF AN ALL-WAY STOP CONTROL SIGN WITH A TIGER TAIL BENEATH THE SIGN. IT APPLIES TO TYPICAL RIGHTS-OF-WAY FOR URBAN ROADS WHICH HAVE A CURB, BOULEVARD, AND SIDEWALK.

THE POST SUPPORTING THE SIGN SHOULD BE INSTALLED IN THE MOUNTING AREA OF THE BOULEVARD AT A LOCATION WHERE THE SIGN IS CLEARLY VISIBLE TO APPROACHING MOTORISTS. THE DISTANCE BETWEEN FACE OF CURB AND POST SHOULD BE AT LEAST 0.75 m AND THE DISTANCE BETWEEN EDGE OF SIDEWALK AND POST SHOULD BE AT LEAST 0.75 m. IF THE LATTER DISTANCE CANNOT BE ACHIEVED, PROTECTIVE TREATMENTS TO THE TIGER TAIL TAB SIGN SHOULD BE CONSIDERED FOR THE SAFETY OF PEDESTRIANS.

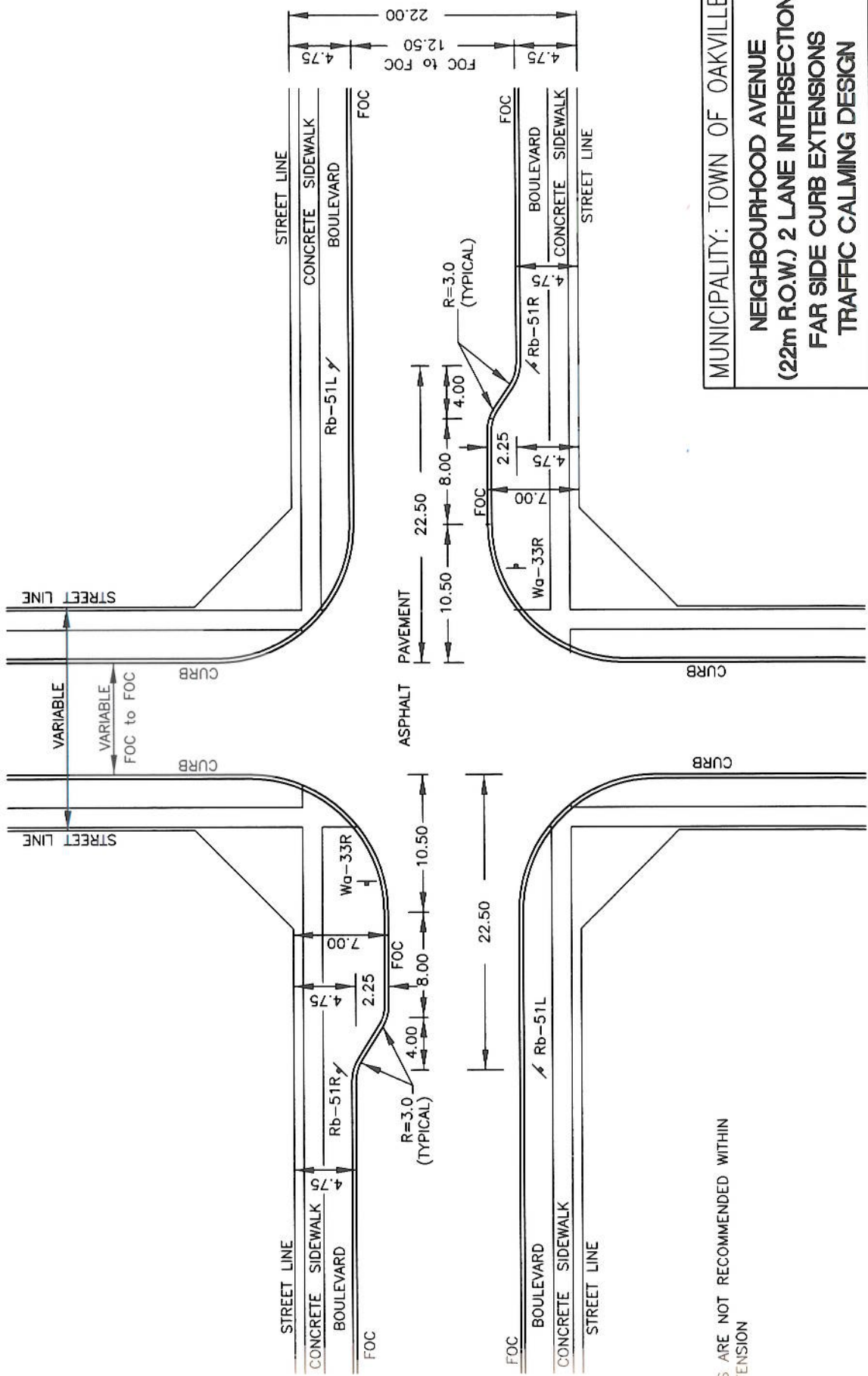
MUNICIPALITY: TOWN OF OAKVILLE

GUIDELINE TO LOCATE POSTS SUPPORTING ALL-WAY STOP SIGN WITH TIGER TAIL TAB


APPROVED *[Signature]* **STD. 9-20**

CREATED **MAR. 1, 2011**

DIRECTOR OF ENGINEERING & CONSTRUCTION

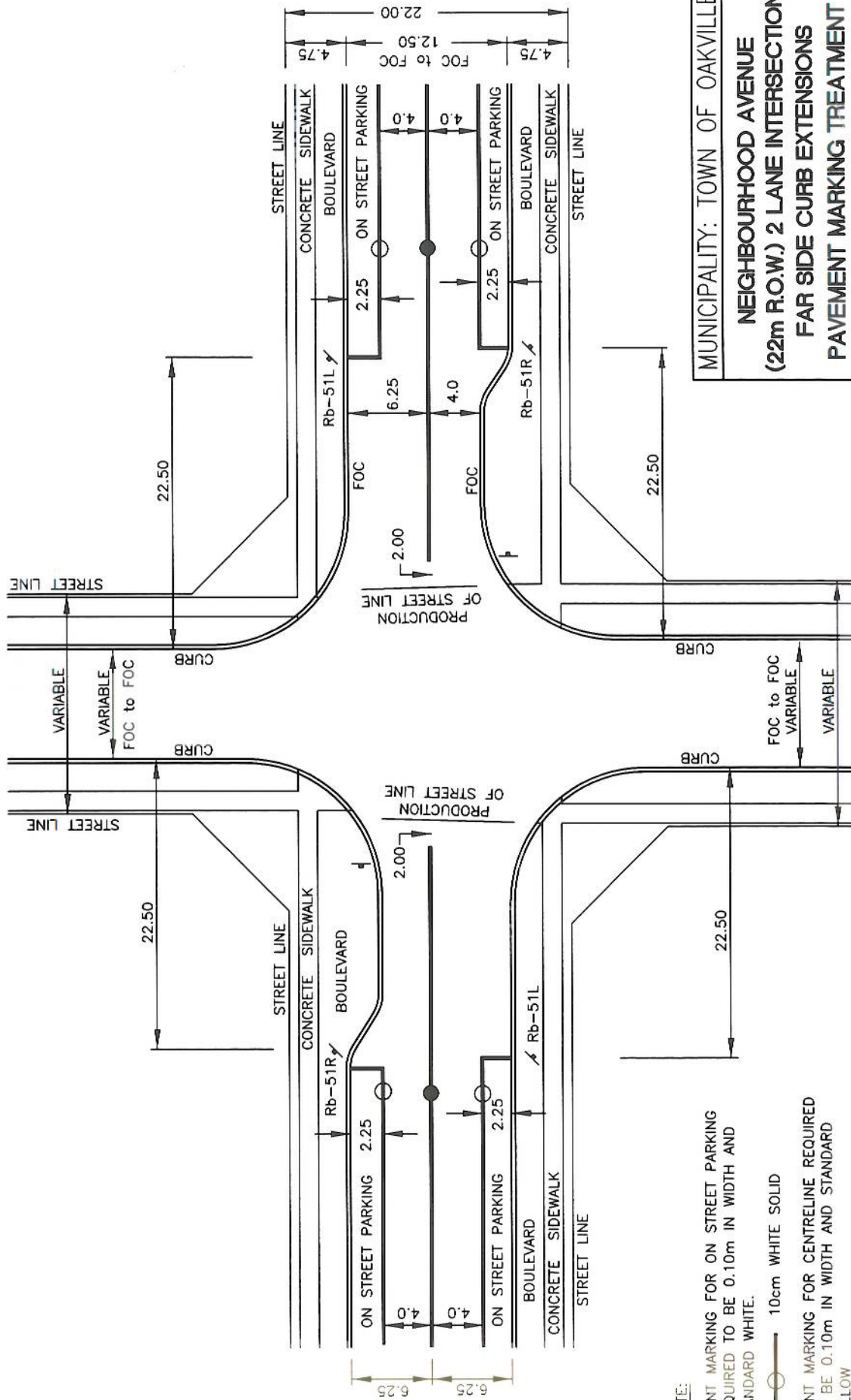


NOTE:
 DRIVEWAYS ARE NOT RECOMMENDED WITHIN CURB EXTENSION

MUNICIPALITY: TOWN OF OAKVILLE	
NEIGHBOURHOOD AVENUE (22m R.O.W.) 2 LANE INTERSECTION FAR SIDE CURB EXTENSIONS TRAFFIC CALMING DESIGN	
APPROVED	STD. 9-21-A
 REVISIONS MAR. 1, 2011 DIRECTOR OF PUBLIC WORKS	

FOC DENOTES FACE OF CURB

DIMENSIONS IN METRES EXCEPT AS NOTED



- NOTE:**
- 10cm WHITE SOLID
 - 10cm YELLOW SOLID
 - FOC DENOTES FACE OF CURB

PAINT MARKING FOR ON STREET PARKING REQUIRED TO BE 0.10m IN WIDTH AND STANDARD WHITE.

PAINT MARKING FOR CENTRELINE REQUIRED TO BE 0.10m IN WIDTH AND STANDARD YELLOW

DIMENSIONS IN METRES EXCEPT AS NOTED

MUNICIPALITY: TOWN OF OAKVILLE

NEIGHBOURHOOD AVENUE

(22m R.O.W.) 2 LANE INTERSECTION

FAR SIDE CURB EXTENSIONS

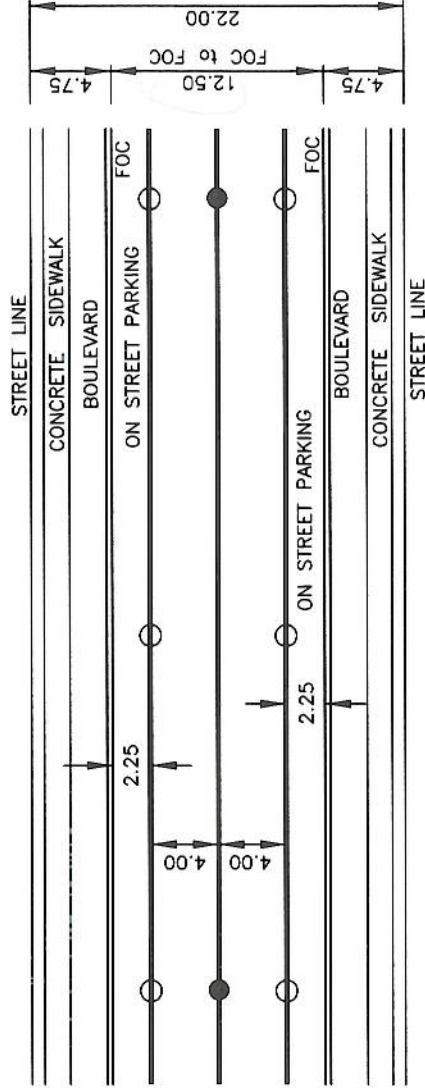
PAVEMENT MARKING TREATMENT

APPROVED *[Signature]*

REVISOR: FEB. 8, 2011

STD. 9-21B

DIRECTOR OF PUBLIC WORKS



NOTE:

PAINT MARKING FOR ON STREET PARKING REQUIRED TO BE 0.10m IN WIDTH AND STANDARD WHITE.

○ 10cm WHITE SOLID

PAINT MARKING FOR CENTRELINE REQUIRED TO BE 0.10m IN WIDTH AND STANDARD YELLOW

● 10cm YELLOW SOLID

FOC DENOTES FACE OF CURB

MUNICIPALITY: TOWN OF OAKVILLE

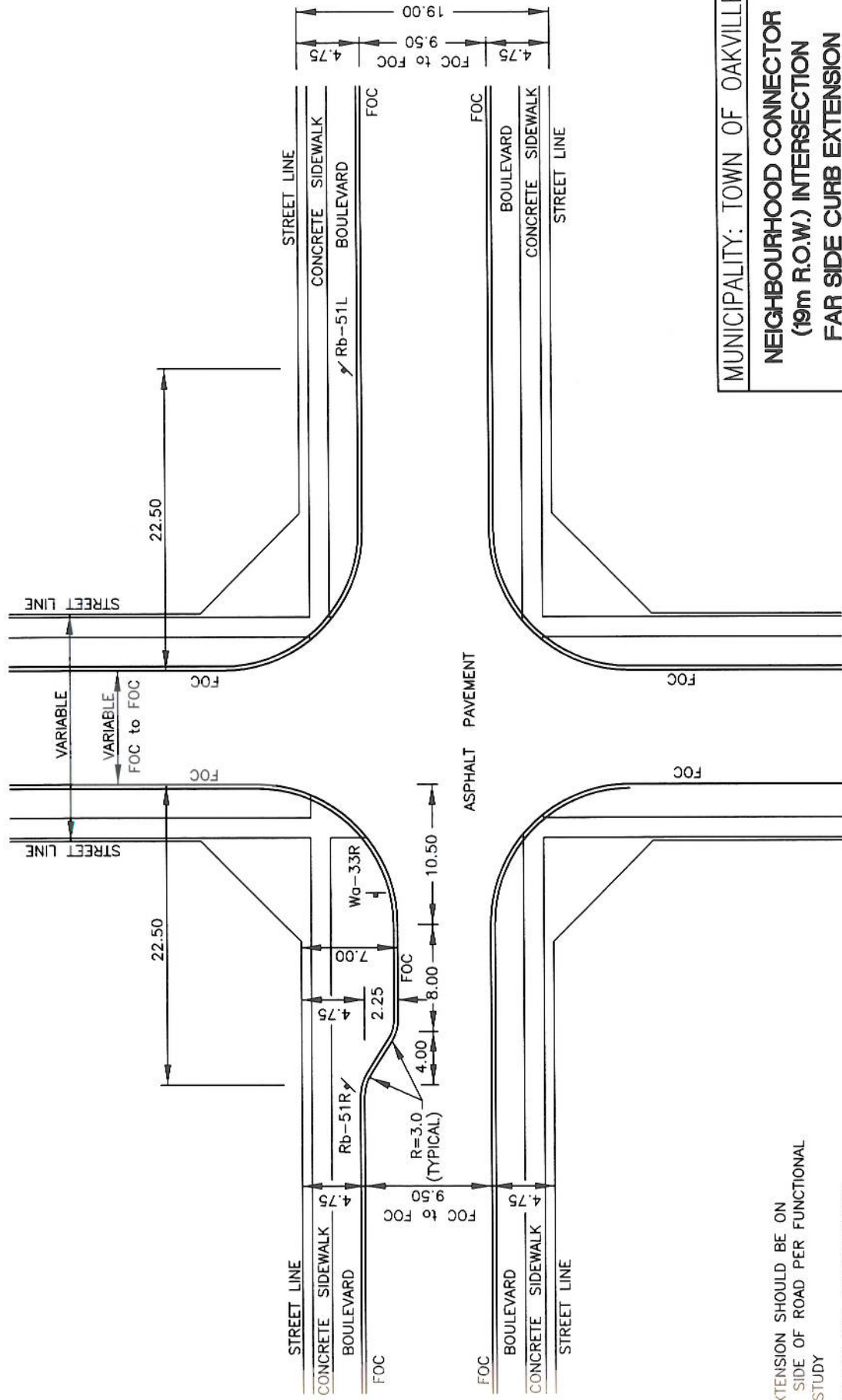
**NEIGHBOURHOOD AVENUE
(22m R.O.W.) 2 LANE MID BLOCK
PAVEMENT MARKING TREATMENT**

APPROVED

[Signature]
DIRECTOR OF PUBLIC WORKS

STD. 9-21-C

CREATED
JAN. 26, 2011



MUNICIPALITY: TOWN OF OAKVILLE

NEIGHBOURHOOD CONNECTOR
 (19m R.O.W.) INTERSECTION
FAR SIDE CURB EXTENSION
TRAFFIC CALMING DESIGN

APPROVED *[Signature]* **STD. 9-22-A**

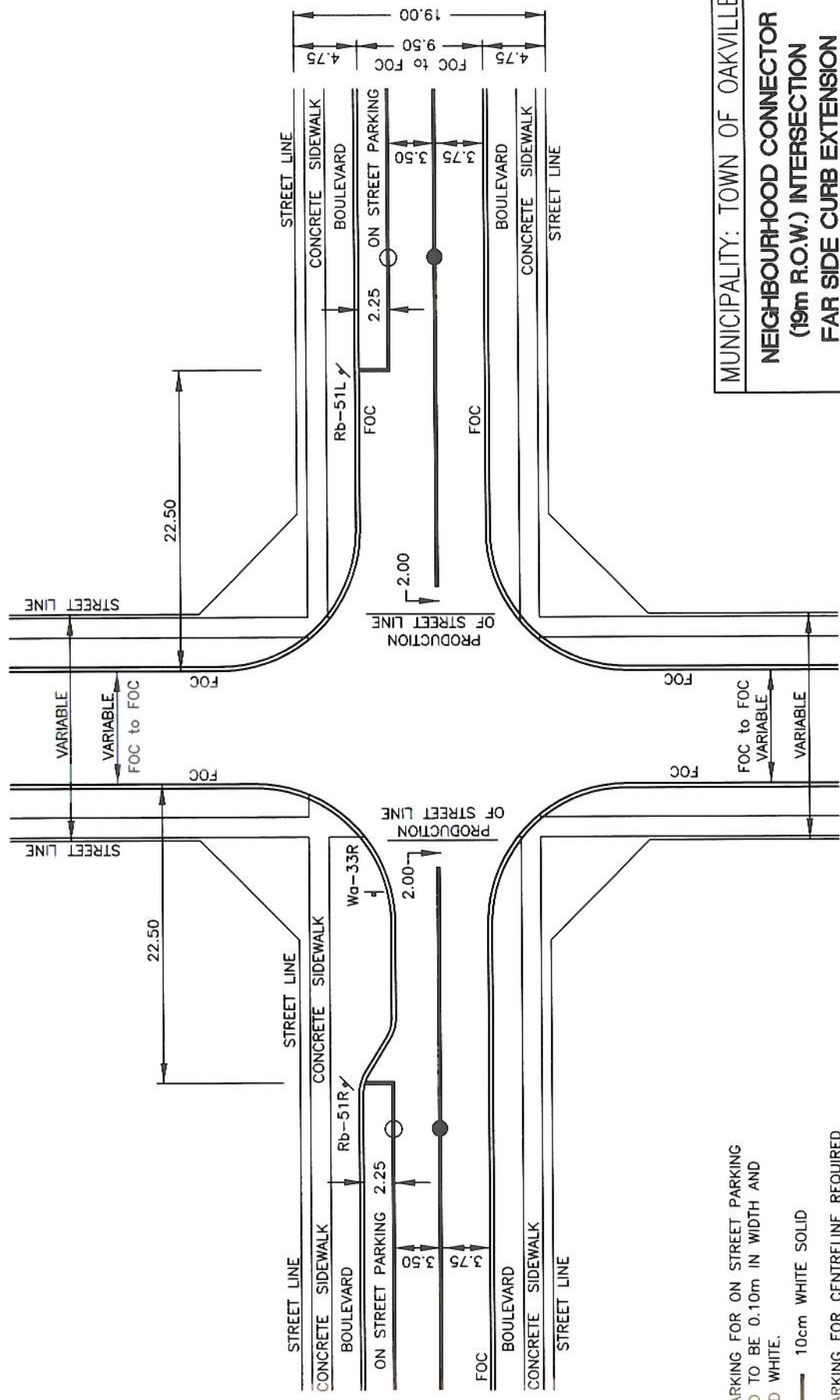
REVISED
 MAR. 1, 2011

DIRECTOR OF PUBLIC WORKS

- NOTE:**
- CURB EXTENSION SHOULD BE ON PARKING SIDE OF ROAD PER FUNCTIONAL DESIGN STUDY
 - DRIVEWAYS ARE NOT RECOMMENDED WITHIN CURB EXTENSION

FOC DENOTES FACE OF CURB

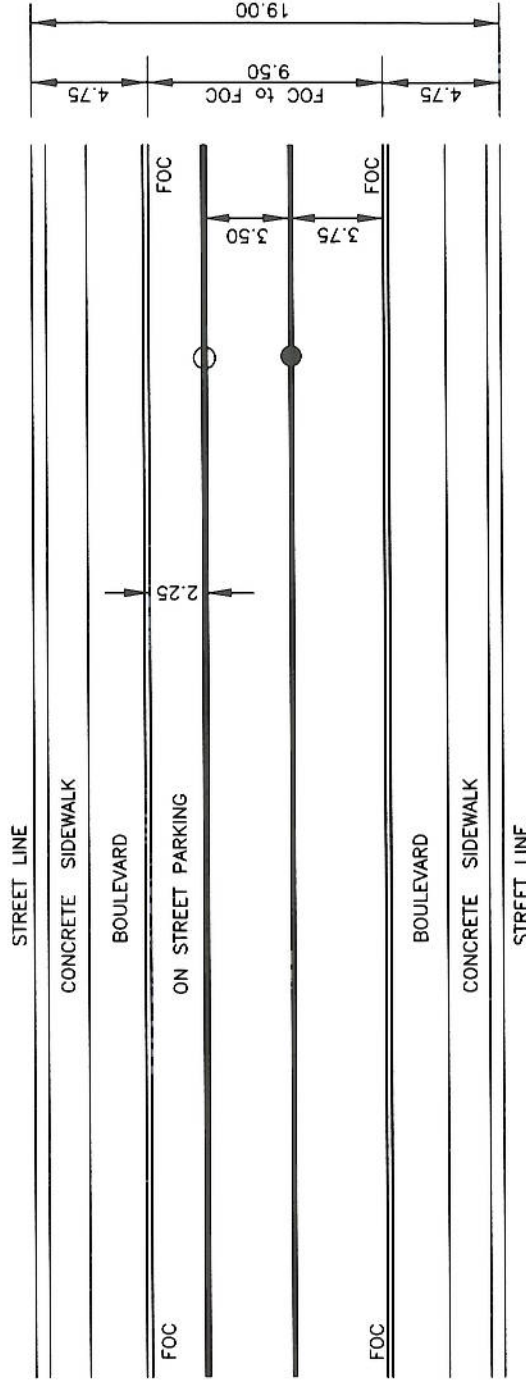
DIMENSIONS IN METRES EXCEPT AS NOTED



NOTE:
 PAINT MARKING FOR ON STREET PARKING
 REQUIRED TO BE 0.10m IN WIDTH AND
 STANDARD WHITE.
 — 10cm WHITE SOLID
 PAINT MARKING FOR CENTRELINE REQUIRED
 TO BE 0.10m IN WIDTH AND STANDARD
 YELLOW
 — 10cm YELLOW SOLID
 FOC DENOTES FACE OF CURB

MUNICIPALITY: TOWN OF OAKVILLE
 NEIGHBOURHOOD CONNECTOR
 (19m R.O.W.) INTERSECTION
 FAR SIDE CURB EXTENSION
 PAVEMENT MARKING TREATMENT
 APPROVED *[Signature]*
 STD. 9-22-B
 DIRECTOR OF PUBLIC WORKS
 FEB. 9, 2011

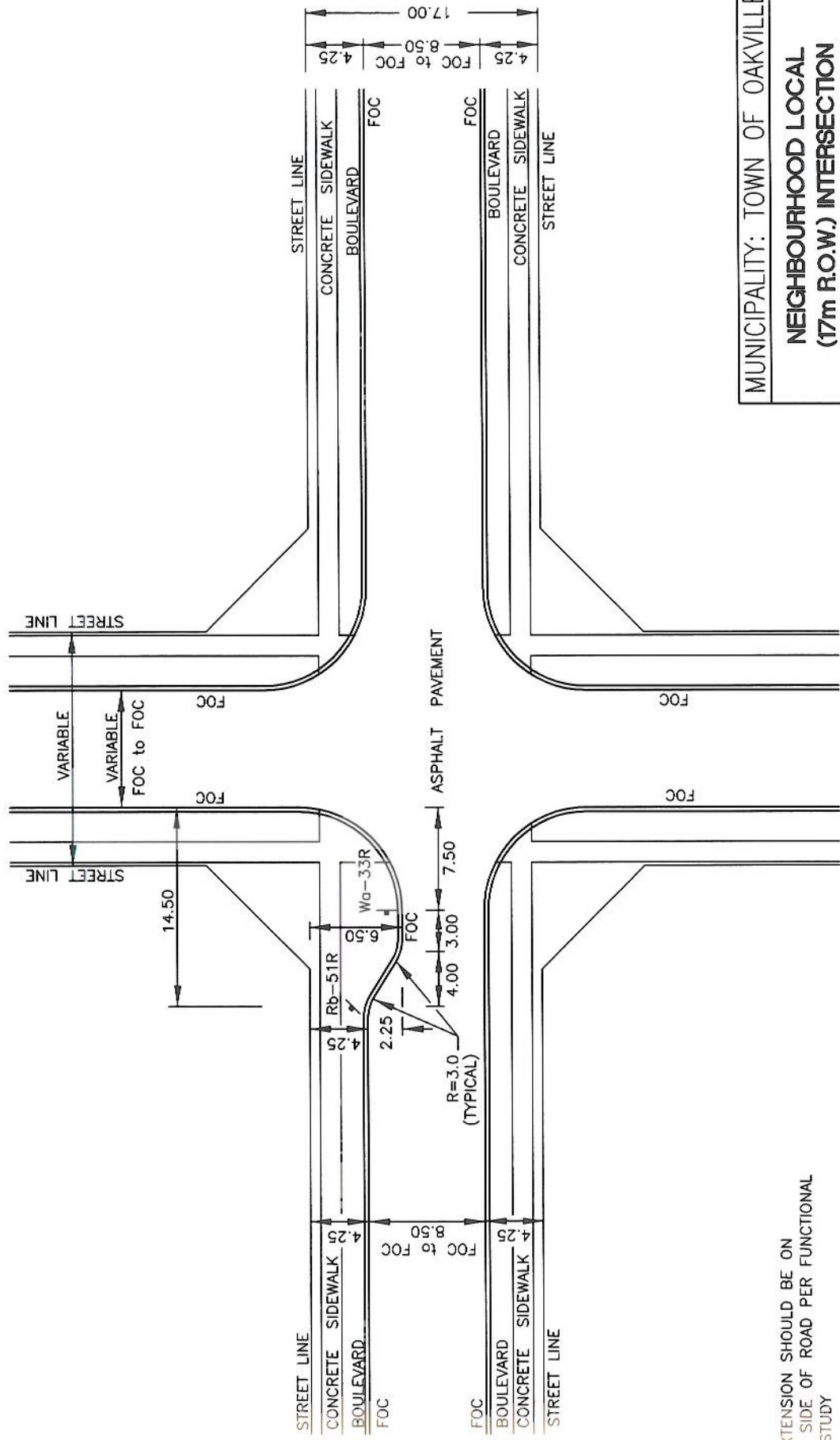
DIMENSIONS IN METRES EXCEPT AS NOTED



NOTE:
 - ON STREET PARKING SHOULD COINCIDE WITH FUNCTIONAL DESIGN STUDY

NOTE:
 PAINT MARKING FOR ON STREET PARKING REQUIRED TO BE 0.10m IN WIDTH AND STANDARD WHITE.
 ○ 10cm WHITE SOLID
 PAINT MARKING FOR CENTRELINE REQUIRED TO BE 0.10m IN WIDTH AND STANDARD YELLOW
 ● 10cm YELLOW SOLID
 FOC DENOTES FACE OF CURB

MUNICIPALITY: TOWN OF OAKVILLE	
NEIGHBOURHOOD CONNECTOR (19m R.O.W.) MID BLOCK PAVEMENT MARKING TREATMENT	
APPROVED	
STANDARD: STD. 9-22-C	CREATED: FEB. 9, 2011
DIRECTOR OF PUBLIC WORKS	



MUNICIPALITY: TOWN OF OAKVILLE

**NEIGHBOURHOOD LOCAL
(17m R.O.W.) INTERSECTION
FAR SIDE CURB EXTENSION
TRAFFIC CALMING DESIGN**

APPROVED *[Signature]*

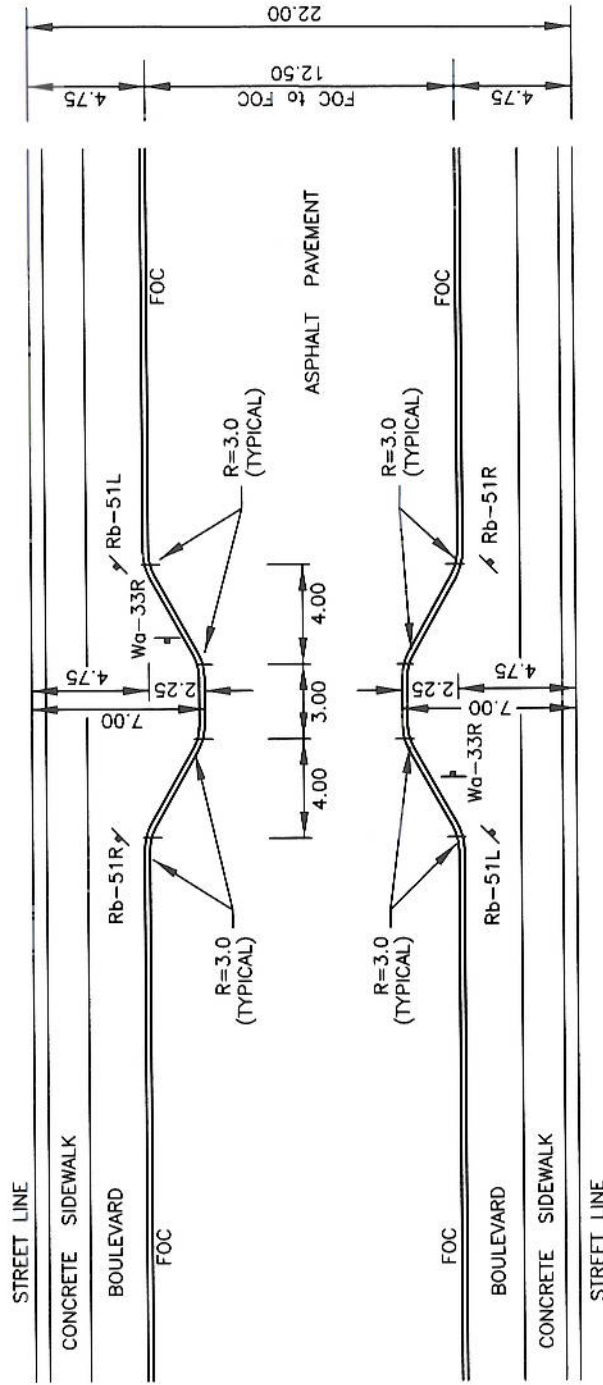
REVISED
MAR. 1, 2011

STD. 9-23-A
DIRECTOR OF PUBLIC WORKS

- NOTE:**
- CURB EXTENSION SHOULD BE ON PARKING SIDE OF ROAD PER FUNCTIONAL DESIGN STUDY
 - DRIVEWAYS ARE NOT RECOMMENDED WITHIN CURB EXTENSION
 - PAVEMENT MARKING NOT REQUIRED ON LOCAL ROADS

FOC DENOTES FACE OF CURB

DIMENSIONS IN METRES EXCEPT AS NOTED



NOTE:

- DRIVEWAYS ARE NOT RECOMMENDED WITHIN CURB EXTENSIONS
- BEST EFFORTS SHOULD BE MADE TO LOCATE CURB EXTENSIONS OPPOSITE TO ONE ANOTHER

FOC DENOTES FACE OF CURB

MUNICIPALITY: TOWN OF OAKVILLE

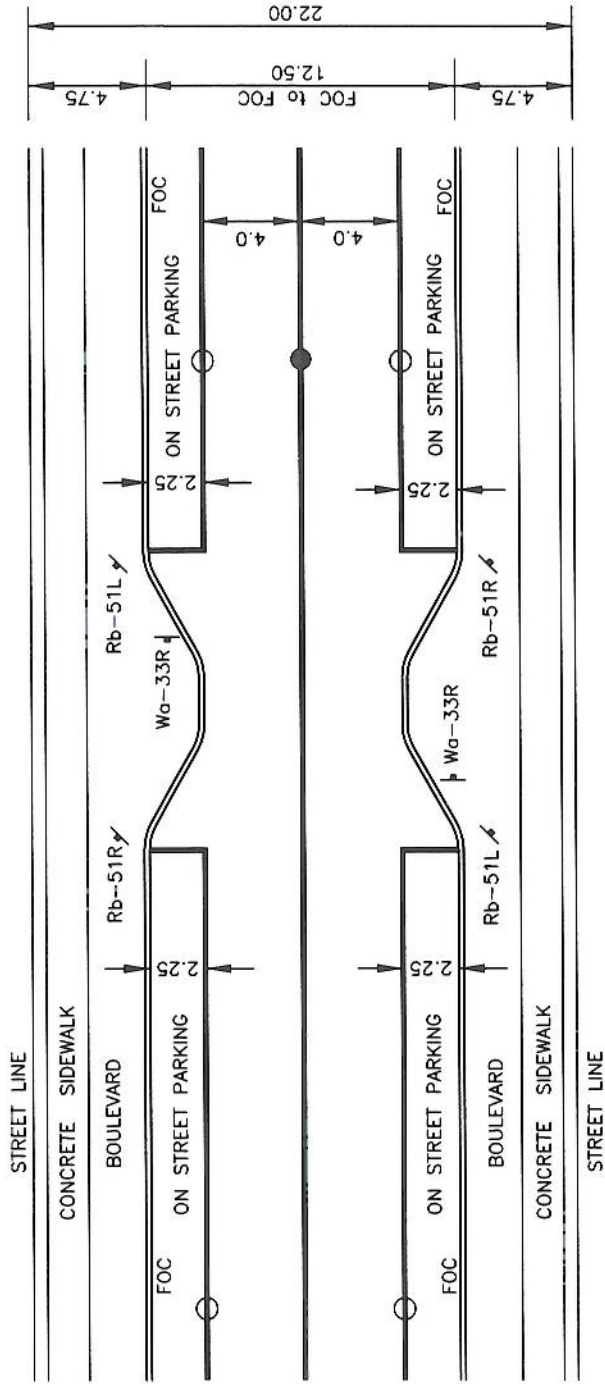
**NEIGHBOURHOOD AVENUE
(22m R.O.W.) MID BLOCK CURB
EXTENSION TRAFFIC CALMING
DESIGN**

APPROVED

DIRECTOR OF PUBLIC WORKS

STD. 9-24-A

CREATED
FEB. 9, 2011



MUNICIPALITY: TOWN OF OAKVILLE
NEIGHBOURHOOD AVENUE
 (22m R.O.W.) MID BLOCK CURB
EXTENSION PAVEMENT MARKING
TREATMENT

APPROVED *[Signature]*
 DIRECTOR OF PUBLIC WORKS

STD. 9-24-B
 CREATED
 FEB. 9, 2011

NOTE:
 PAINT MARKING FOR ON STREET PARKING
 REQUIRED TO BE 0.10m IN WIDTH AND
 STANDARD WHITE.

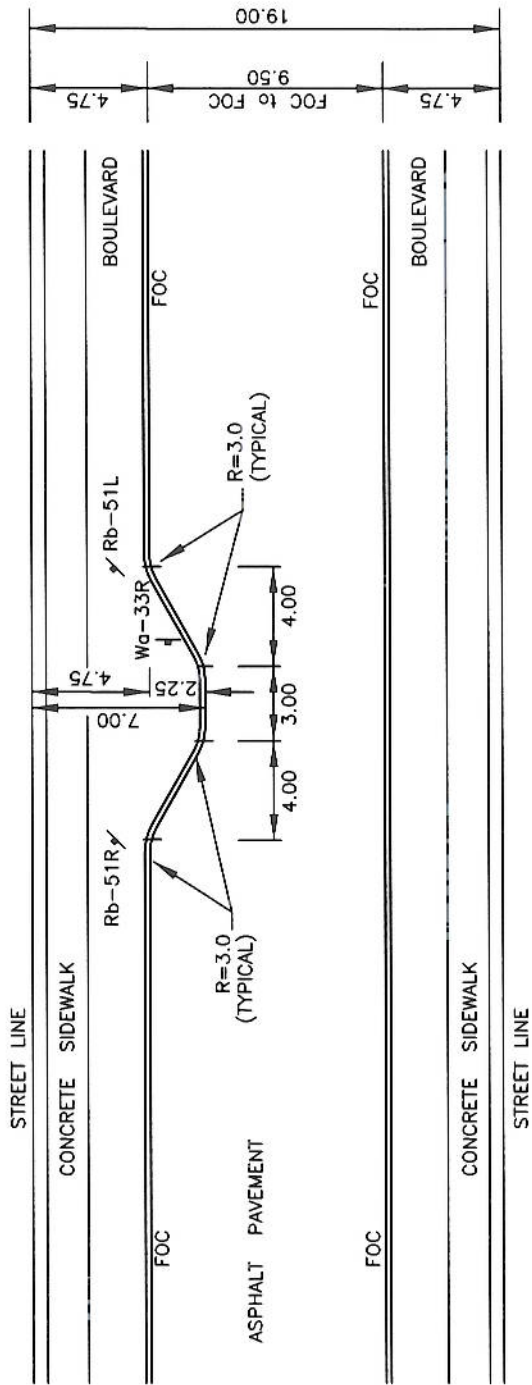
○ 10cm WHITE SOLID

PAINT MARKING FOR CENTRELINE REQUIRED
 TO BE 0.10m IN WIDTH AND STANDARD
 YELLOW

● 10cm YELLOW SOLID

FOC DENOTES FACE OF CURB


DIMENSIONS IN METRES EXCEPT AS NOTED

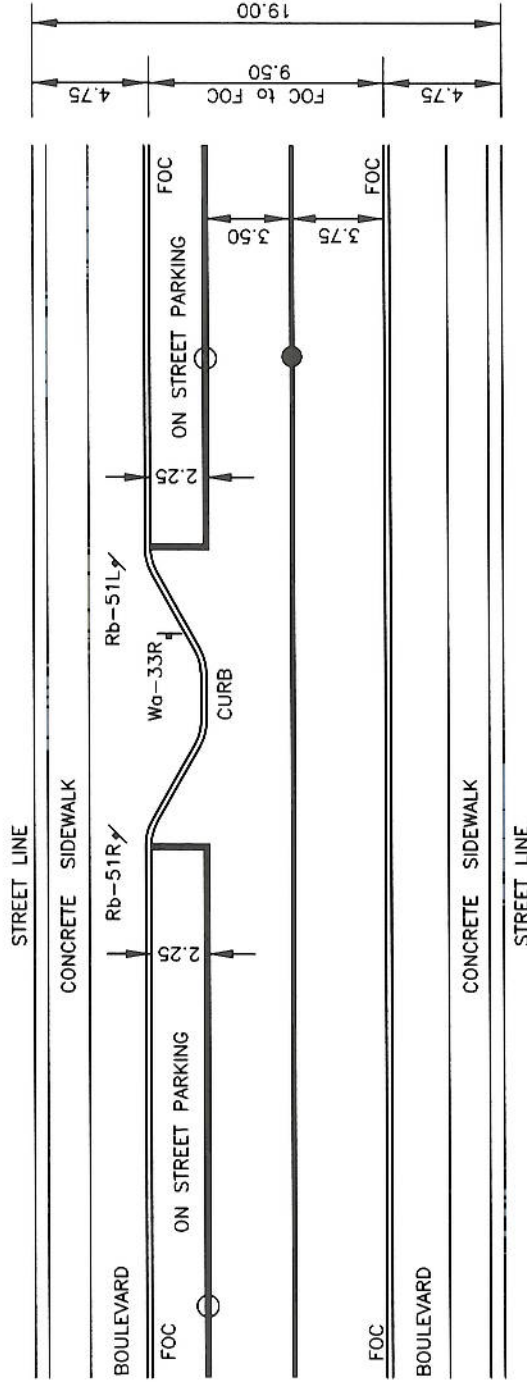


NOTE:

- CURB EXTENSION SHOULD BE ON PARKING SIDE OF ROAD PER FUNCTIONAL DESIGN STUDY
- DRIVEWAYS ARE NOT RECOMMENDED WITHIN CURB EXTENSION

FOC DENOTES FACE OF CURB

MUNICIPALITY: TOWN OF OAKVILLE	
NEIGHBOURHOOD CONNECTOR (19m R.O.W.) MID BLOCK CURB EXTENSION TRAFFIC CALMING DESIGN	
APPROVED	 DIRECTOR OF PUBLIC WORKS
STD. 9-25-A	REVISED FEB. 8, 2011



NOTE:

PAINT MARKING FOR ON STREET PARKING
REQUIRED TO BE 0.10m IN WIDTH AND
STANDARD WHITE.

○ 10cm WHITE SOLID

PAINT MARKING FOR CENTRELINE REQUIRED
TO BE 0.10m IN WIDTH AND STANDARD
YELLOW

● 10cm YELLOW SOLID

FOC DENOTES FACE OF CURB

MUNICIPALITY: TOWN OF OAKVILLE

**NEIGHBOURHOOD CONNECTOR
(19m R.O.W.) MID BLOCK CURB
EXTENSION PAVEMENT MARKING
TREATMENT**

APPROVED

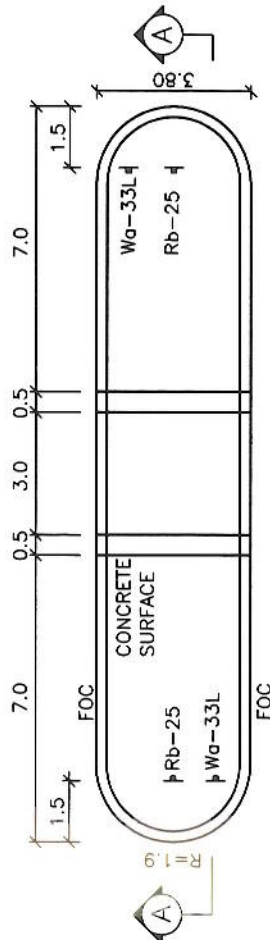
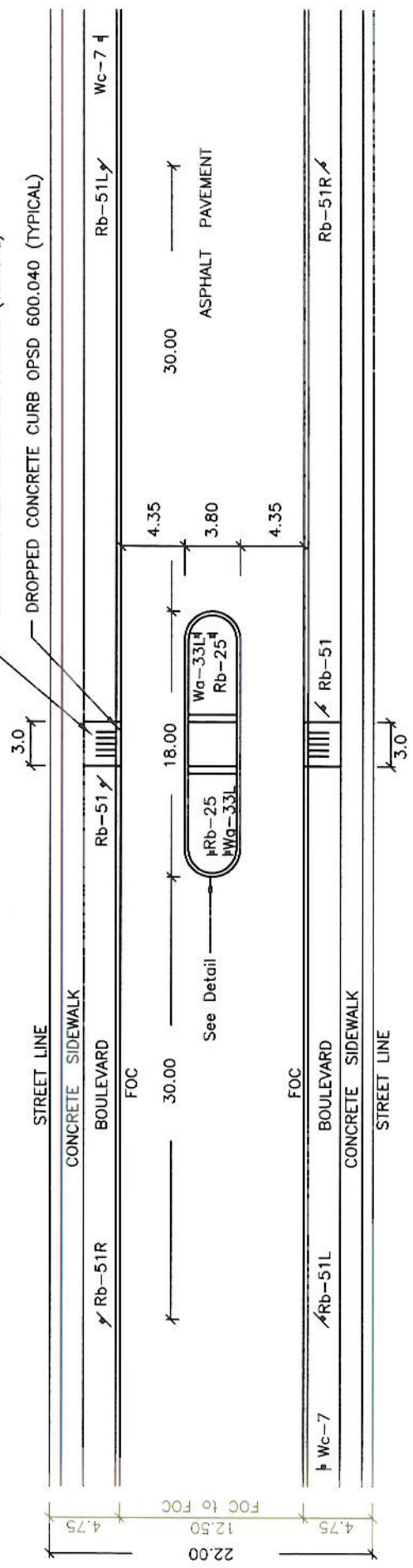
[Signature]
DIRECTOR OF PUBLIC WORKS

STD. 9-25-B

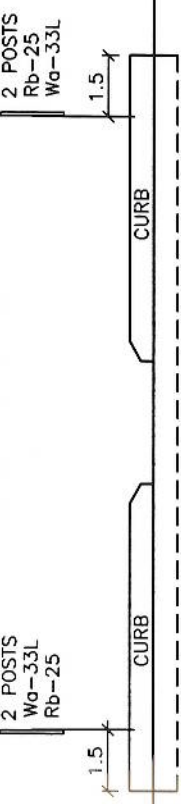
REVISED
FEB. 9, 2011

CONCRETE SIDEWALK RAMP WITH DIRECTIONAL LINES
 OPSD 310.020 AND OPSD 310.030 (TYPICAL)

DROPPED CONCRETE CURB OPSD 600.040 (TYPICAL)



DETAIL -- Not to Scale



- NOTE:**
- INSTALL PEDESTRIANS AHEAD SIGN Wc-7 ON BOTH SIDES OF ROADWAY AT APPROPRIATE LOCATION PER OTM
 - INSTALL TRAIL SIGNAGE AND TRAIL BARRIERS AT APPROPRIATE LOCATIONS

SECTION A-A

DIMENSIONS IN METRES EXCEPT AS NOTED

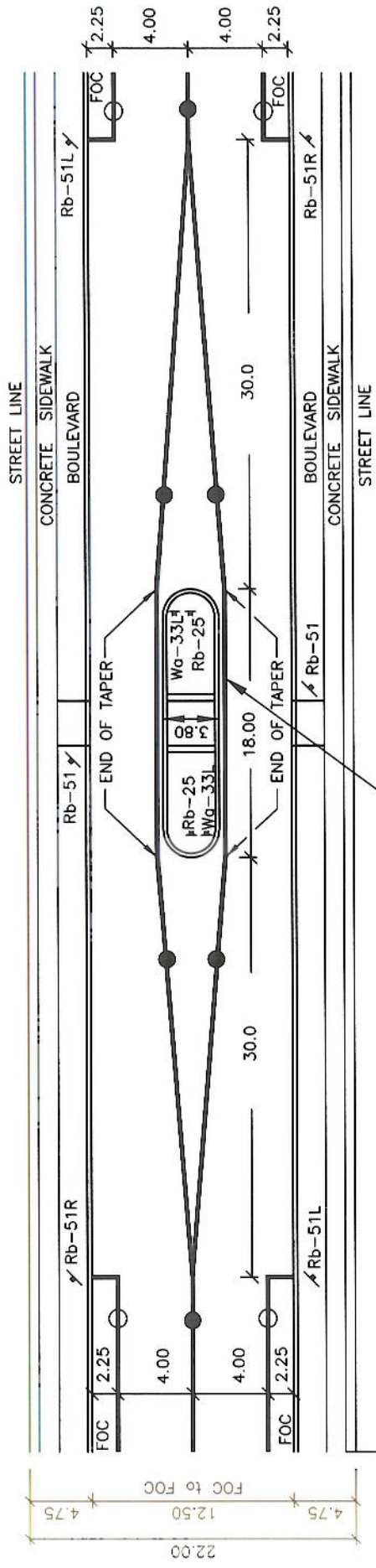
FOC DENOTES FACE OF CURB

MUNICIPALITY: TOWN OF OAKVILLE

**NEIGHBOURHOOD AVENUE
 (22m R.O.W.) MID BLOCK
 PEDESTRIAN CROSSING DESIGN**

APPROVED: *[Signature]*
 DIRECTOR OF PUBLIC WORKS

STD. 9-27-A
 CREATED
 FEB. 9, 2011



NOTE:

PAINT MARKING FOR ON STREET PARKING
REQUIRED TO BE 0.10m IN WIDTH AND
STANDARD WHITE.

○ 10cm WHITE SOLID

PAINT MARKING FOR CENTRELINE REQUIRED
TO BE 0.10m IN WIDTH AND STANDARD
YELLOW

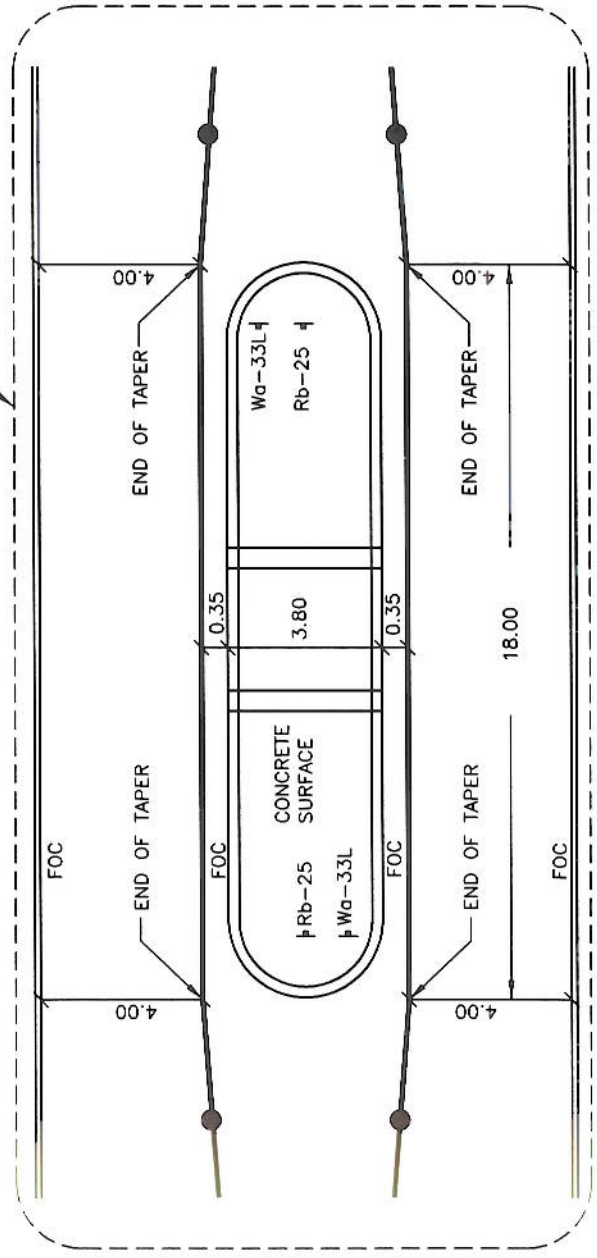
● 10cm YELLOW SOLID

FOC DENOTES FACE OF CURB

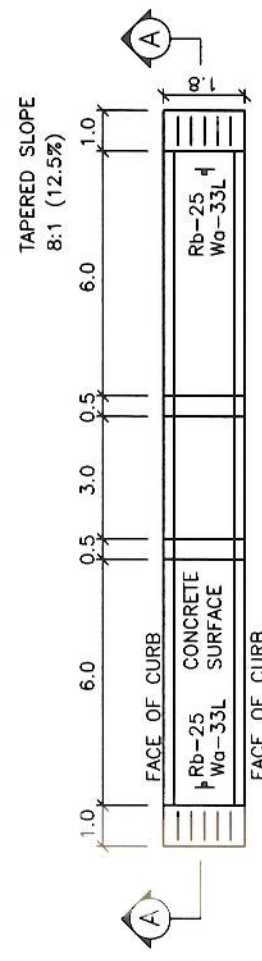
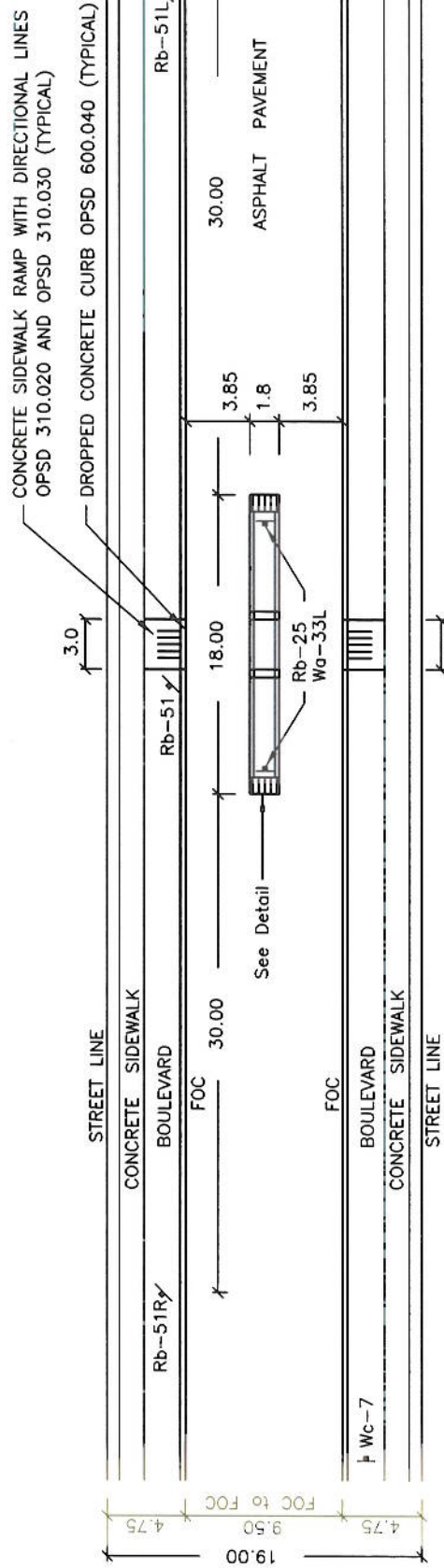
MUNICIPALITY: TOWN OF OAKVILLE
NEIGHBOURHOOD AVENUE
 (22m R.O.W.) MID BLOCK
**PEDESTRIAN CROSSING PAVEMENT
 MARKING TREATMENT**

APPROVED *[Signature]*
 DIRECTOR OF PUBLIC WORKS

STD. 9-27-B
 CREATED
 FEB. 9, 2011



DETAIL - Not to Scale



DETAIL - Not to Scale

SINGLE POST
Rb-25
Wa-33L

TAPERED SLOPE
8:1 (12.5%)

SINGLE POST
Rb-25
Wa-33L

TAPERED SLOPE
8:1 (12.5%)

OPSD 600.090 MODIFIED WIDTH STANDARD GUTTER
OPSD 504.010
OPSD 310.020

SECTION A-A

- NOTE:**
- MID BLOCK CROSSING REQUIRES TAPERED SLOPE OF 8:1 (12.5%) AT BOTH ENDS OF ISLAND AND SEMI-MOUNTABLE CURB
 - INSTALL PEDESTRIANS AHEAD SIGN Wc-7 ON BOTH SIDES OF ROADWAY AT APPROPRIATE LOCATION PER OTM
 - INSTALL TRAIL SIGNAGE AND TRAIL BARRIERS AT APPROPRIATE LOCATIONS

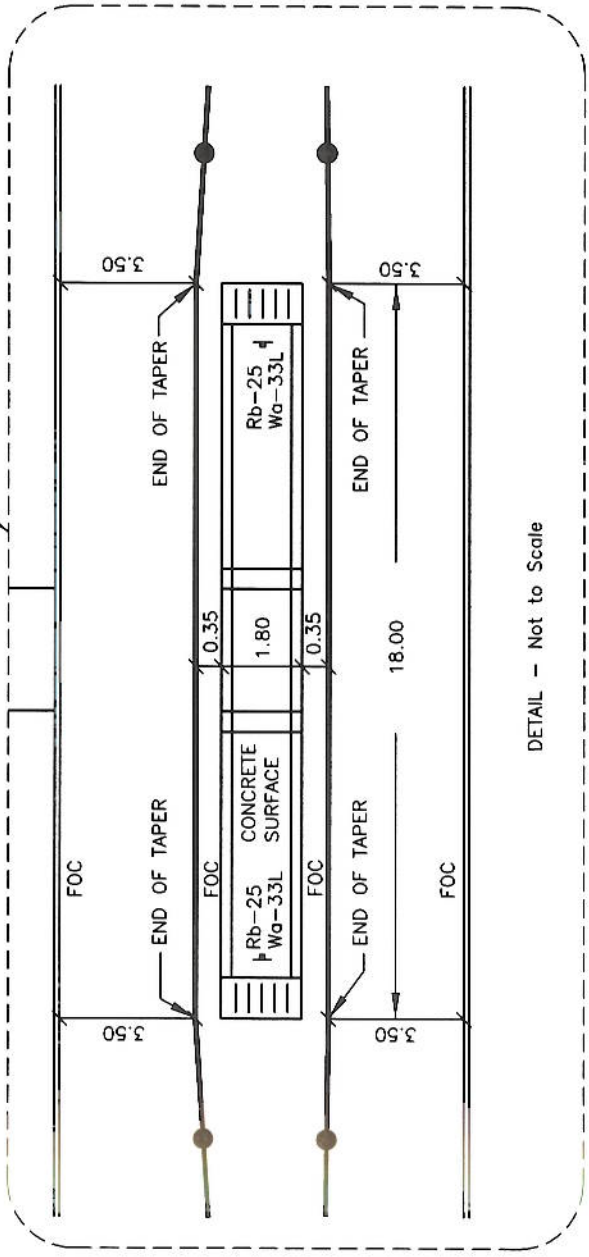
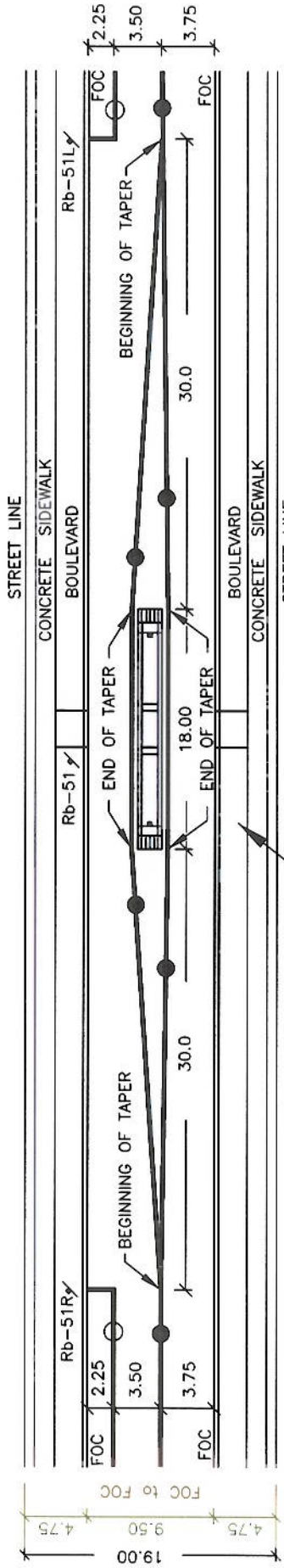
MUNICIPALITY: TOWN OF OAKVILLE

NEIGHBOURHOOD CONNECTOR
(19m R.O.W.) MID BLOCK PEDESTRIAN CROSSING DESIGN

APPROVED *[Signature]* **STD. 9-28-A**

REVISOR **FEB. 8, 2011**

DIRECTOR OF PUBLIC WORKS



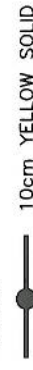
DETAIL -- Not to Scale

NOTE:

PAINT MARKING FOR ON STREET PARKING REQUIRED TO BE 0.10m IN WIDTH AND STANDARD WHITE.



PAINT MARKING FOR CENTRELINE REQUIRED TO BE 0.10m IN WIDTH AND STANDARD YELLOW



FOC DENOTES FACE OF CURB

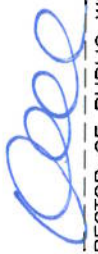
MUNICIPALITY: TOWN OF OAKVILLE
 NEIGHBOURHOOD CONNECTOR
 (19m R.O.W.) MID BLOCK PEDESTRIAN
 CROSSING PAVEMENT MARKING
 TREATMENT

APPROVED *[Signature]* **STD. 9-28-B**
 REVISIONS
 FEB. 8, 2011
 DIRECTOR OF PUBLIC WORKS

Road Width	Mid Block Pavement Markings	
	Basic Design *	Traffic Calming And/Or Cycle Lanes Required *
14.5m (FOC to FOC)	 1.8 3.7 3.5 3.7 1.8	 2.25 Parking Area 1.75 Cycle Lane 3.25 3.25 1.75 Cycle Lane 2.25 Parking Area
12.5m (FOC to FOC)	 1.5 3.25 3.0 3.25 1.5	 1.75 Cycle Lane 3.25 3.25 1.75 Cycle Lane 2.50 Parking Area
10.0m (FOC to FOC)	 5.00 5.00	 1.5 3.5 3.5 1.5
8.5m (FOC to FOC)	 4.25 4.25	 1.0 3.25 3.25 1.0
7.5m (FOC to FOC)	 7.5	 3.75 3.75

MUNICIPALITY: TOWN OF OAKVILLE

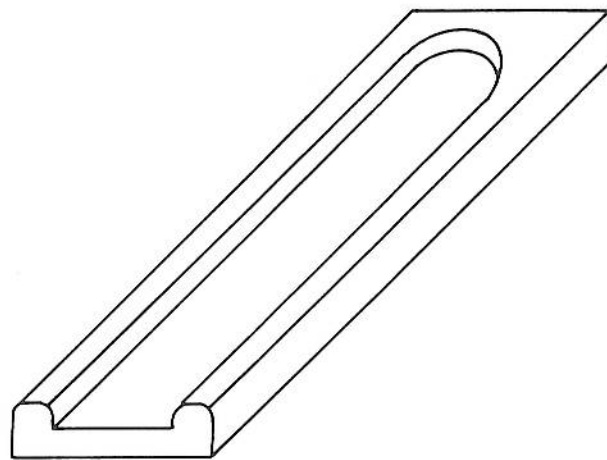
GUIDELINES FOR PAVEMENT MARKINGS OF SUBDIVISION ROADS SOUTH OF DUNDAS STREET

APPROVED  **STD. 9-30**

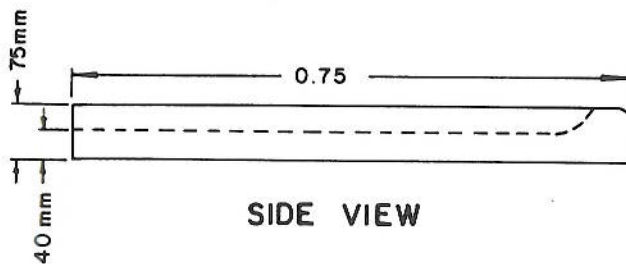
CREATED MAR. 17, 2011
DIRECTOR OF PUBLIC WORKS

* CONSULTATION WITH STAFF REQUIRED TO DETERMINE REQUIREMENTS. SHOULD REFER TO OAKVILLE TRAFFIC CALMING GUIDELINES FOR NEW DEVELOPMENTS AND ACTIVE TRANSPORTATION MASTER PLAN.

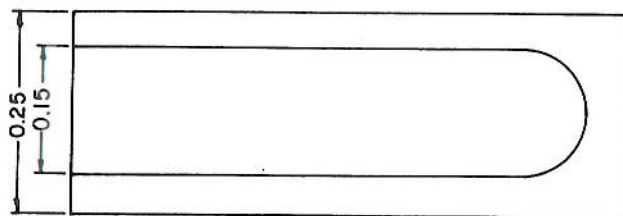
FOC DENOTES FACE OF CURB
DIMENSIONS IN METRES EXCEPT AS NOTED



ISOMETRIC VIEW

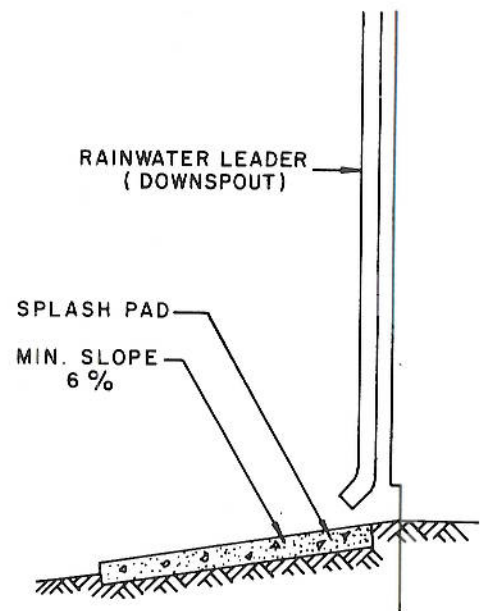


SIDE VIEW



TOP VIEW

(NOT TO SCALE)



RAINWATER LEADER
(DOWNSPOUT)

SPLASH PAD
MIN. SLOPE
6%

CROSS - SECTION

NOTES:

- 1) ALL DIMENSIONS MINIMUM
- 2) CONCRETE TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 20 MPa IN 28 DAYS

MUNICIPALITY : TOWN OF OAKVILLE

**PRECAST CONCRETE
SPLASH PAD**

APPROVED

[Signature]
DIRECTOR OF PUBLIC WORKS

STD.10-1

REVISION DATE
07201995

DIMENSIONS IN m EXCEPT AS NOTED


DRIVEWAY BY - LAW NUMBER 1988-220
ACCESS GUIDELINES

<u>LAND USE</u>	<u>ROAD TYPE</u>	<u>ENTRANCE WIDTH AT PROPERTY LINE</u>	<u>RADIUS</u>	<u>GUIDE FOR # OF ACCESSES</u>
LOW DENSITY RESIDENTIAL	MAJOR	SINGLE 5m DOUBLE 7m TRIPLE 9m	NONE	18m FRONTAGE OR LESS -1 OVER 18m FRONTAGE -2
	MINOR	SINGLE 3.5m DOUBLE 6.5m TRIPLE 9m	NONE	18m FRONTAGE OR LESS -1 OVER 18m FRONTAGE -2
	MAJOR	7.5m - 9.0m	6.0m-7.5m	LESS THAN 60-75 UNITS 1-1 EMERGENCY MORE THAN 60-70 UNITS 2
MINOR	7.5m	4.5m-6.0m		
MULTIPLE RESIDENTIAL	MAJOR	7.5m - 9.0m	6.0m-9.0m	MINIMUM 45m SPACING BETWEEN ACCESSES
	MINOR	7.5m		
MINOR COMMERCIAL (FLOOR AREA UP TO 2000 sq.m)	MAJOR	7.5m - 9.0m	6.0m-9.0m	MINIMUM 30m SPACING BETWEEN ACCESSES
	MINOR	7.5m - 9.0m		
MAJOR COMMERCIAL (OVER 2000 sq.m)	MAJOR	DIVIDED DRIVEWAY (UP TO 15.0m)	9.0m-10.5m	MINIMUM 60m SPACING BETWEEN ACCESSES
	MINOR	UNDIVIDED DRIVEWAY (9.0m-10.5m)	7.5m-12.0m	MINIMUM 30m SPACING BETWEEN ACCESSES
INDUSTRIAL	ALL	AS REQUIRED FOR TRUCK MAXIMUM MOVEMENTS MAXIMUM 12.0m	15.0m	30m FRONTAGE -1 FULL OR 2 MUTUALS 30m-60m FRONTAGE -2 FULL (30m SPACING) OVER 60m - AS REQUIRED(30m SPACING)

MAJOR-MAJOR ARTERIALS, MINOR ARTERIALS, INDUSTRIAL ARTERIALS, COLLECTORS WITHIN 75m OF INTERSECTION WITH ANY ARTERIAL ROAD.
MINOR-LOCALS, RESIDENTIAL COLLECTORS.
PERMISSIBLE DRIVEWAY GRADES
INDUSTRIAL, COMMERCIAL AND MULTIPLE RESIDENTIAL:-MAXIMUM 5%-WITHIN 7.5m OF STREETLINE
-MAXIMUM 10%-BALANCE OF SITE (15% IF HEATED OR COVERED)

MUNICIPALITY: TOWN OF OAKVILLE

DRIVEWAY ENTRANCE CRITERIA
(BY-LAW 1988-220 AS AMENDED)

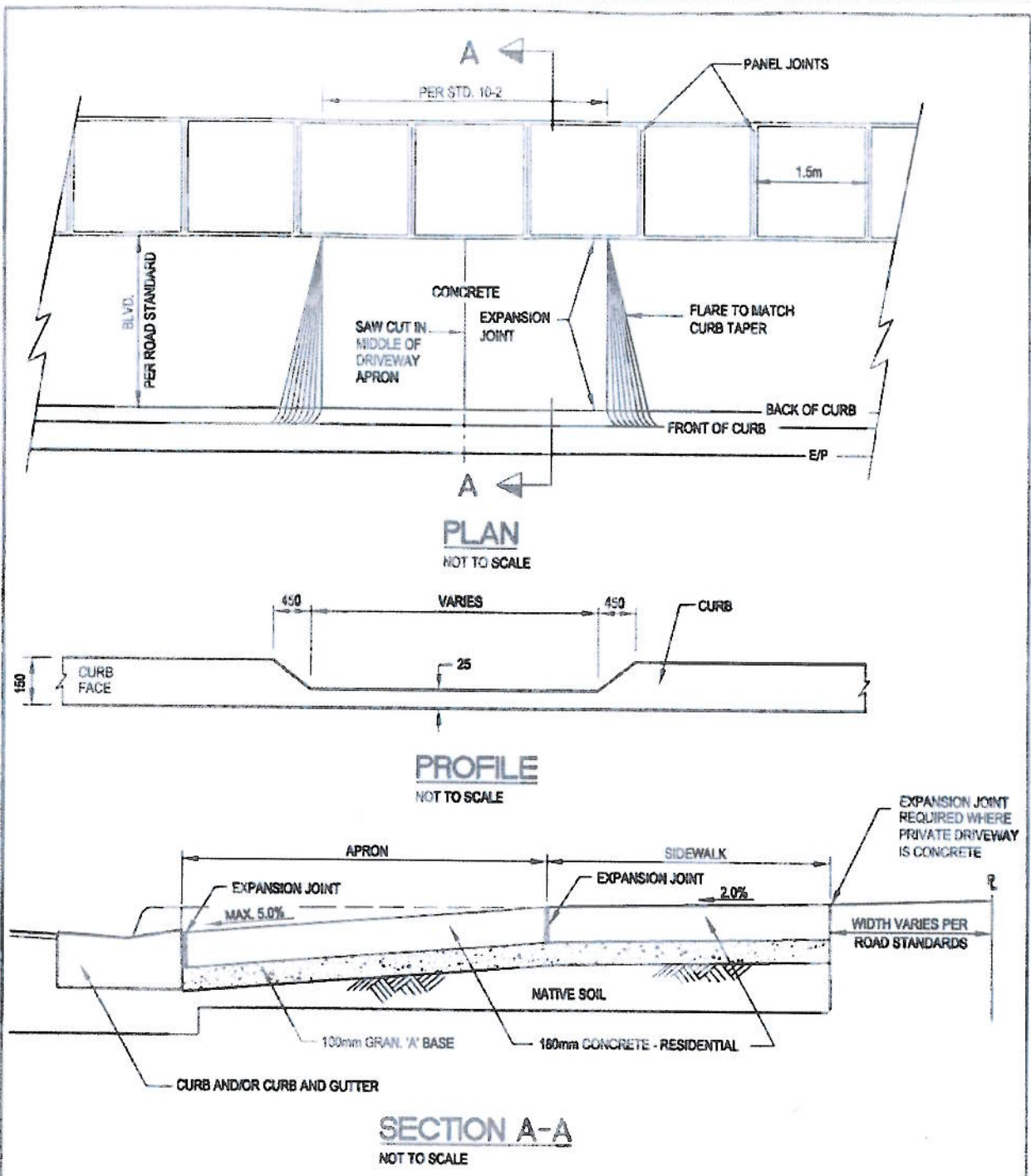
APPROVED  DIRECTOR OF PUBLIC WORKS

STD.10-2

REVISION DATE
MAY 1, 2003

LOW DENSITY RESIDENTIAL-FOR PRIVATE DRIVEWAYS, ON MINOR STREETS:
RECOMMENDED 10% MAXIMUM.

NOTE:
FOR URBAN ROADWAYS, ROAD CURB IS TO BE EXTENDED (DEPRESSED)
ACROSS ALL DRIVEWAYS UNLESS DRIVEWAY IS SIGNALIZED.



NOTES:

1. ENTRANCE WIDTH AT PROPERTY LINE AS PER DRIVEWAY ENTRANCE STD. 10-2.
2. EXPANSION JOINTS REQUIRED AT BOTH SIDES OF APPROACH.
3. ALL CONCRETE IS TO HAVE A 28 DAY STRENGTH OF 30 MPa GRANULAR BASE TO BE COMPACTED TO 98% SPD.

MUNICIPALITY: TOWN OF OAKVILLE

RESIDENTIAL CONCRETE DRIVEWAY APRON

APPROVED

[Signature]

DIRECTOR OF DEVELOPMENT
ENGINEERING

STD. 10-3

DATE APPROVED
FEB 2013

DIMENSIONS IN millimetres EXCEPT AS NOTED